

Access DB# 17498

# SEARCH REQUEST FORM

Scientific and Technical Information Center

9E02

Requester's Full Name: HARDEE Examiner #: \_\_\_\_\_ Date: 5/25  
Art Unit: 1751 Phone Number 305-5599 Serial Number: 09/319,108  
Mail Box and Bldg/Room Location: 9B36 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

\*\*\*\*\*  
Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: \_\_\_\_\_

Inventors (please provide full names): \_\_\_\_\_

Earliest Priority Filing Date: \_\_\_\_\_

*\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

Whatever you can find.  
Thanks  
➤

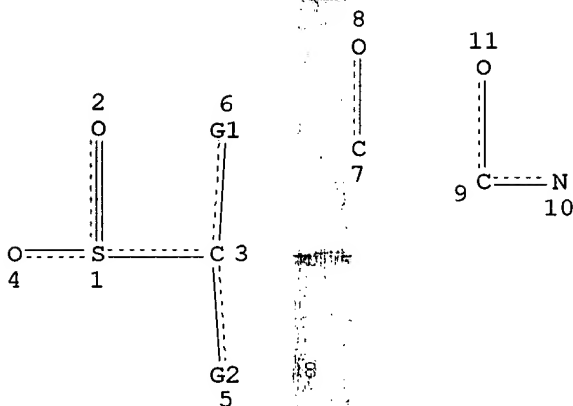
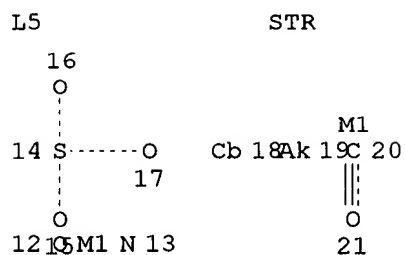
R<sub>1</sub> = SH  
R<sub>3</sub> = COOM OR COOR<sub>4</sub>

## STAFF USE ONLY

	Type of Search	Vendors and cost where applicable
Searcher: <u>708</u>	NA Sequence (#) _____	STN <u>✓</u>
Searcher Phone #: <u>X 4137</u>	AA Sequence (#) _____	Dialog _____
Searcher Location: <u>ELC - 1700</u>	Structure (#) <u>2</u>	Questel/Orbit _____
Date Searcher Picked Up: _____	Bibliographic _____	Dr.Link _____
Date Completed: <u>5-30-00</u>	Litigation _____	Lexis/Nexis _____
Searcher Prep & Review Time: <u>55</u>	Fulltext _____	Sequence Systems _____
Clerical Prep Time: <u>8</u>	Patent Family _____	WWW/Internet _____
Online Time: <u>45</u>	Other _____	Other (specify) _____

PTO-1590 (1-2000)

Hardee 09/319,108



VAR G1=12/13

VAR G2=14/18/19/20/7/9

## NODE ATTRIBUTES:

HCOUNT	IS	M1	AT	12
HCOUNT	IS	M1	AT	20
NSPEC	IS	C	AT	1
NSPEC	IS	C	AT	2
NSPEC	IS	C	AT	3
NSPEC	IS	C	AT	4
NSPEC	IS	C	AT	5
NSPEC	IS	C	AT	6
NSPEC	IS	C	AT	7
NSPEC	IS	C	AT	8
NSPEC	IS	C	AT	9
NSPEC	IS	C	AT	10
NSPEC	IS	C	AT	11

DEFAULT MLEVEL IS ATOM

MLEVEL	IS	CLASS	AT	1	2	3	4	7	8	9	10	11	12	13	14	15	16	17	18	19
				20	21															

DEFAULT ECLEVEL IS LIMITED

## GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 21

## STEREO ATTRIBUTES: NONE

L7	1916	SEA	FILE=REGISTRY	SSS	FUL	L5
L8	977	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L7
L9	73568	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(INDUSTRIAL ORGANIC CHEMICALS, LEATHER, FATS, AND WAXES)/SC,SX
L10	5	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L8 AND L9

Hardee 09/319,108

L10 ANSWER 1 OF 5 HCAPLUS COPYRIGHT 2000 ACS  
AN 1999:761138 HCAPLUS  
DN 131:336739  
TI Synthesis of 3,3-dimethylbutyraldehyde via base hydrolysis of  
1,1-dichloro-3,3-dimethylbutane or 1-bromo-1-chloro-3,3-dimethylbutane and  
purification by precipitation of the aldehyde-bisulfite adduct with  
rinsing and aldehyde regeneration  
IN Prakash, Indra; Guo, Zhi  
PA The NutraSweet Company, USA  
SO U.S., 4 pp.  
CODEN: USXXAM  
DT Patent  
LA English  
IC ICM C07C045-63  
NCL 568490000  
CC 23-14 (Aliphatic Compounds)  
Section cross-reference(s): 45, 48

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5994593	A	19991130	US 1998-154150	19980917
	WO 2000015592	A1	20000323	WO 1999-US21349	19990916
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
PRAI	US 1998-154150		19980917		

AB 3,3-Dimethylbutyraldehyde is synthesized via hydrolysis of  
1,1-dichloro-3,3-dimethylbutane or 1-bromo-1-chloro-3,3-dimethylbutane in  
the presence of water and a base (e.g., zinc oxide) and is purified via  
formation of the aldehyde-bisulfite adduct, pptn., washing with org.  
solvents (e.g., MTBE), and acid or base (e.g., NaHCO<sub>3</sub>) regeneration of the  
aldehyde.

ST dimethylbutyraldehyde hydrolysis manuf purifn; dichlorodimethylbutane  
hydrolysis manuf dimethylbutyraldehyde; bromochlorodimethylbutane  
hydrolysis manuf dimethylbutyraldehyde; bisulfite adduct  
dimethylbutyraldehyde pptn

IT Carboxylic acids, uses  
RL: NUU (Nonbiological use, unclassified); USES (Uses)  
(esters, solvents; in purifn. of the 3,3-dimethylbutyraldehyde-  
bisulfite adduct)

IT Purification  
(of 3,3-dimethylbutyraldehyde via base hydrolysis of  
1,1-dichloro-3,3-dimethylbutane or 1-bromo-1-chloro-3,3-dimethylbutane  
and formation and pptn. of the aldehyde-bisulfite adduct with rinsing  
and aldehyde)

IT Precipitation (chemical)  
(purifn. of 3,3-dimethylbutyraldehyde via base hydrolysis of  
1,1-dichloro-3,3-dimethylbutane or 1-bromo-1-chloro-3,3-dimethylbutane  
and formation and pptn. of the aldehyde-bisulfite adduct with rinsing  
and aldehyde regeneration)

IT Alcohols, uses  
Esters, uses  
Ethers, uses  
Hydrocarbons, uses  
RL: NUU (Nonbiological use, unclassified); USES (Uses)

(solvents; in purification) Best Available Copy dimethylbutyraldehyde-bisulfite adduct)

IT Hydrolysis

(synthesis of 3,3-dimethylbutyraldehyde via base hydrolysis of 1,1-dichloro-3,3-dimethylbutane or 1-bromo-1-chloro-3,3-dimethylbutane)

IT 67-63-0, 2-Propanol, uses 108-88-3, Toluene, uses 110-54-3, Hexane, uses 110-82-7, Cyclohexane, uses 141-78-6, Acetic acid ethyl ester, uses 142-82-5, Heptane, uses 1634-04-4, Mtbe

RL: NUU (Nonbiological use, unclassified); USES (Uses)

(solvent; synthesis of 3,3-dimethylbutyraldehyde via base hydrolysis of 1,1-dichloro-3,3-dimethylbutane or 1-bromo-1-chloro-3,3-dimethylbutane and purifn. by pptn. of the aldehyde-bisulfite adduct with rinsing and aldehyde regeneration)

IT 250155-17-0P

RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)

(synthesis of 3,3-dimethylbutyraldehyde via base hydrolysis of 1,1-dichloro-3,3-dimethylbutane or 1-bromo-1-chloro-3,3-dimethylbutane and purifn. by pptn. of the aldehyde-bisulfite adduct with rinsing and aldehyde regeneration)

IT 2987-16-8P, 3,3-Dimethylbutyraldehyde

RL: IMF (Industrial manufacture); PUR (Purification or recovery); SPN (Synthetic preparation); PREP (Preparation)

(synthesis of 3,3-dimethylbutyraldehyde via base hydrolysis of 1,1-dichloro-3,3-dimethylbutane or 1-bromo-1-chloro-3,3-dimethylbutane and purifn. by pptn. of the aldehyde-bisulfite adduct with rinsing and aldehyde regeneration)

IT 7732-18-5, Water, reactions

RL: NUU (Nonbiological use, unclassified); RCT (Reactant); USES (Uses)

(synthesis of 3,3-dimethylbutyraldehyde via base hydrolysis of 1,1-dichloro-3,3-dimethylbutane or 1-bromo-1-chloro-3,3-dimethylbutane and purifn. by pptn. of the aldehyde-bisulfite adduct with rinsing and aldehyde regeneration)

IT 144-55-8, Sodium bicarbonate, reactions 298-14-6, Potassium bicarbonate 471-34-1, Calcium carbonate, reactions 497-19-8, Sodium carbonate, reactions 584-08-7, Potassium carbonate 1314-13-2, Zinc oxide, reactions 1344-28-1, Aluminum oxide (Al<sub>2</sub>O<sub>3</sub>), reactions 3486-35-9, Zinc carbonate 6130-96-7, 1,1-Dichloro-3,3-dimethylbutane 7558-79-4, Disodium hydrogenphosphate 7558-80-7, Sodium dihydrogenphosphate 7631-90-5, Sodium bisulfite 7664-38-2, Phosphoric acid, reactions 7664-93-9, Sulfuric acid, reactions 7758-11-4, Dipotassium hydrogenphosphate 7778-77-0, Potassium dihydrogenphosphate 53268-47-6

RL: RCT (Reactant)

(synthesis of 3,3-dimethylbutyraldehyde via base hydrolysis of 1,1-dichloro-3,3-dimethylbutane or 1-bromo-1-chloro-3,3-dimethylbutane and purifn. by pptn. of the aldehyde-bisulfite adduct with rinsing and aldehyde regeneration)

RE.CNT 9

RE

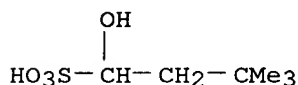
- (1) Anon; RU 721400 1980
- (2) Botteron, D; J Org Chem 1962, V27, P1059
- (3) Brandstrom, A; Acta Chem Scand 1959, V13(3), P610
- (4) Claude; US 5510508 1996
- (5) Nofre; US 5480668 1996
- (6) Perrin; Purification of Laboratory Chemicals 2nd edition 1980, P46
- (7) Perrin, D; Purification of Laboratory Chemicals 3rd ed 1988, P60
- (8) Prakash; US 5728862 1998 HCAPLUS
- (9) Schmerling, L; J Am Chem Soc 1946, V68, P1650

IT 250155-17-0P

RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)

(synthesis of 3,3-dimethylbutyraldehyde via base hydrolysis of 1,1-dichloro-3,3-dimethylbutane or 1-bromo-1-chloro-3,3-dimethylbutane and purifn. by pptn. of the aldehyde-bisulfite adduct with rinsing and aldehyde regeneration)

CN 1-Butanesulfonic acid, 1-hydroxy-3,3-dimethyl-, monosodium salt (9CI) (CA INDEX NAME)



● Na

L10 ANSWER 2 OF 5 HCAPLUS COPYRIGHT 2000 ACS

AN 1999:330068 HCAPLUS

DN 130:337845

TI High-yield synthesis of 3,3-dimethylbutyraldehyde via the liquid-phase oxidation of 1-chloro-3,3-dimethylbutane with inorganic bromides or iodides in dimethyl sulfoxide

IN Guo, Zhi; Prakash, Indra

PA The Nutrasweet Company, USA

SO U.S., 5 pp.

CODEN: USXXAM

DT Patent

LA English

IC ICM C07C045-63

NCL 568490000

CC 23-14 (Aliphatic Compounds)

Section cross-reference(s): 17, 45, 48

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5905175	A	19990518	US 1998-81609	19980520
	WO 9959951	A1	19991125	WO 1999-US9919	19990507
W:	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW:	GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				

PRAI US 1998-81609 19980520

OS CASREACT 130:337845

AB 3,3-Dimethylbutyraldehyde, an intermediate in the manuf. of aspartame (no data), is prepd. in a reproducible and highly economical manner and in very high purity by the oxidn. of 1-chloro-3,3-dimethylbutane (prepd. by the addn. of tert-Bu chloride with ethylene in the presence of AlCl<sub>3</sub>) dissolved in DMSO with an inorg. bromide (e.g., NaBr) or iodide and in the presence of a base (e.g., ZnO) followed by purifn. of the crude product via the formation of an aldehyde-bisulfite adduct.

ST dimethylbutyraldehyde prepn oxidn chlorodimethylbutane; purifn dimethylbutyraldehyde bisulfite addn product

IT Secondary amines

RL: RCT (Reactant)

(bases; high-yield synthesis of 3,3-dimethylbutyraldehyde via the liq.-phase oxidn. of 1-chloro-3,3-dimethylbutane in the presence of)

IT Bases, reactions

RL: RCT (Reactant)

(high-yield synthesis of 3,3-dimethylbutyraldehyde via the liq.-phase oxidn. of 1-chloro-3,3-dimethylbutane in the presence of)

IT Oxidation

(liq.-phase; of 1-chloro-3,3-dimethylbutane with inorg. bromides or iodides in DMSO in the high-yield prepn. of 3,3-dimethylbutyraldehyde)

IT Purification **Best Available Copy**  
 (of crude 3,3-dimethylbutyraldehyde via the sodium bisulfite addn. product)

IT Bromides, reactions  
 Iodides, reactions  
 RL: RCT (Reactant)  
 (oxidants the liq.-phase oxidn. of 1-chloro-3,3-dimethylbutane to 3,3-dimethylbutyraldehyde)

IT Alcohols, uses  
 Esters, uses  
 Ethers, uses  
 Hydrocarbons, uses  
 RL: NUU (Nonbiological use, unclassified); USES (Uses)  
 (solvents; in the high-yield synthesis of 3,3-dimethylbutyraldehyde via the liq.-phase oxidn. of 1-chloro-3,3-dimethylbutane with inorg. bromides or iodides in DMSO)

IT 7446-70-0, Aluminum chloride, uses  
 RL: CAT (Catalyst use); USES (Uses)  
 (high-yield synthesis of 3,3-dimethylbutyraldehyde via the liq.-phase oxidn. of 1-chloro-3,3-dimethylbutane with inorg. bromides or iodides in DMSO)

IT 2855-08-5P, 1-Chloro-3,3-dimethylbutane **44870-96-4P**  
 RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
 (high-yield synthesis of 3,3-dimethylbutyraldehyde via the liq.-phase oxidn. of 1-chloro-3,3-dimethylbutane with inorg. bromides or iodides in DMSO)

IT 2987-16-8P, 3,3-Dimethylbutyraldehyde  
 RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)  
 (high-yield synthesis of 3,3-dimethylbutyraldehyde via the liq.-phase oxidn. of 1-chloro-3,3-dimethylbutane with inorg. bromides or iodides in DMSO)

IT 67-68-5, DmsO, uses 7732-18-5, Water, uses  
 RL: NUU (Nonbiological use, unclassified); USES (Uses)  
 (high-yield synthesis of 3,3-dimethylbutyraldehyde via the liq.-phase oxidn. of 1-chloro-3,3-dimethylbutane with inorg. bromides or iodides in DMSO)

IT 74-85-1, Ethylene, reactions 110-86-1, Pyridine, reactions 144-55-8, Sodium bicarbonate, reactions 298-14-6, Potassium bicarbonate 471-34-1, Calcium carbonate, reactions 497-19-8, Sodium carbonate, reactions 507-20-0, tert-Butyl chloride 546-93-0, Magnesium carbonate 584-08-7, Potassium carbonate 1305-78-8, Calcium oxide, reactions 1314-13-2, Zinc oxide, reactions 1344-28-1, Aluminum oxide, reactions 3486-35-9, Zinc carbonate 7550-35-8, Lithium bromide 7558-79-4 7558-80-7, Sodium dihydrogenphosphate 7601-54-9, Sodium phosphate 7631-90-5, Sodium bisulfite 7647-01-0, Hydrochloric acid, reactions 7647-15-6, Sodium bromide, reactions 7664-38-2, Phosphoric acid, reactions 7664-41-7, Ammonia, reactions 7664-93-9, Sulfuric acid, reactions 7681-11-0, Potassium iodide, reactions 7681-82-5, Sodium iodide, reactions 7699-45-8, Zinc bromide 7727-15-3, Aluminum bromide 7757-87-1 7758-02-3, Potassium bromide, reactions 7758-11-4 7758-87-4, Calcium phosphate 7778-53-2, Potassium phosphate 7778-77-0, Potassium dihydrogenphosphate 7784-23-8, Aluminum iodide 7789-41-5, Calcium bromide 7789-48-2, Magnesium bromide 10102-68-8, Calcium iodide 10139-47-6, Zinc iodide 10361-65-6, Ammonium phosphate 10377-51-2, Lithium iodide 10377-58-9, Magnesium iodide 12027-06-4, Ammonium iodide 12027-06-4D, Ammonium iodide, tetraalkyl derivs. 12124-97-9, Ammonium bromide 12124-97-9D, Ammonium bromide, tetraalkyl derivs.  
 RL: RCT (Reactant)  
 (high-yield synthesis of 3,3-dimethylbutyraldehyde via the liq.-phase oxidn. of 1-chloro-3,3-dimethylbutane with inorg. bromides or iodides in DMSO)

RE.CNT 19  
 RE  
 (1) Acta; Chem Scand 1959, V13, P612

- Best Available Copy
- (2) Anon; EP 0374952 1990 HCAPLUS
  - (3) Anon; EP 0391652 1990 HCAPLUS
  - (4) Babler; US 4175204 1979 HCAPLUS
  - (5) Cheung, C; J Org Chem 1989, V54(3), P570 HCAPLUS
  - (6) Claude; US 5510508 1996
  - (7) Dave, P; Syn Comm 1986, V16(11), P1343 HCAPLUS
  - (8) Fujii, T; Chem and Pharm Bull 1978, V26(10), P3233 HCAPLUS
  - (9) Ganem, B; Tetra Lett 1974, 11, P917 HCAPLUS
  - (10) Kornblum, N; J Am Chem Soc 1957, V79(24), P6562
  - (11) Kornblum, N; J Am Chem Soc 1959, V81(15), P4113
  - (12) Mager, H; Tetrahedron 1974, V30, P917 HCAPLUS
  - (13) Major, R; J Org Chem 1958, V23(10), P1563
  - (14) Nace, H; J Org Chem 1959, V24(11), P1792
  - (15) Nofre; US 5480668 1996
  - (16) Paritosh; Synthetic Commun 1986, V16(11), P1343
  - (17) Perrin & Perrin; Purification of Laboratory Chemicals 1986, P67
  - (18) Wiberg, K; J Am Chem Soc 1981, V103(13), P4473
  - (19) Wilson, N; J Org Chem 1996, V61(9), P2918

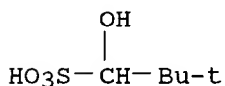
IT 44870-96-4P

RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)

(high-yield synthesis of 3,3-dimethylbutyraldehyde via the liq.-phase oxidn. of 1-chloro-3,3-dimethylbutane with inorg. bromides or iodides in DMSO)

RN 44870-96-4 HCAPLUS

CN 1-Propanesulfonic acid, 1-hydroxy-2,2-dimethyl-, monosodium salt (9CI)  
(CA INDEX NAME)



● Na

*Applicant*

L10 ANSWER 3 OF 5 HCAPLUS COPYRIGHT 2000 ACS

AN 1999:238546 HCAPLUS

DN 130:298301

TI Sulfinic acid derivatives and their use as reducing agents

IN Berghofer, Josef; Rothmann, Harry

PA L. Brueggemann K.-G., Germany

SO Ger. Offen., 14 pp.

CODEN: GWXXBX

DT Patent

LA German

IC ICM C07C313-04

ICS C07B031-00; D06L003-10; D06P001-22; D06P005-15; C08F002-22

ICA C07C309-08; C07C309-17

CC 45-4 (Industrial Organic Chemicals,  
Leather, Fats, and Waxes)

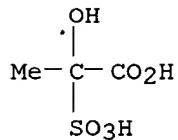
Section cross-reference(s): 35, 40, 43

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19743759	A1	19990408	DE 1997-19743759	19971002
	WO 9918067	A1	19990415	WO 1998-EP4055	19980701
	W: AU, BG, BR, CA, CN, CZ, EE, HR, HU, IL, JP, KR, LT, LV, NO, PL, RO, RU, SG, SK, TR, UA, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9885414	A1	19990427	AU 1998-85414	19980701
	EP 956282	A1	19991117	EP 1998-936404	19980701
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,				

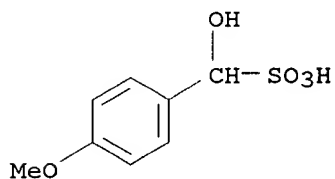
NO 9902617 A 19990601 NO 1999-2617 19990601  
PRAI DE 1997-19743759 19971002  
WO 1998-EP4055 19980701  
OS MARPAT 130:298301  
AB Sulfonic acids and their salts, R1R2R3CSO2M (M = H, ammonium, mono- or divalent metal ion; R1 = OH, optionally substituted amino; R2 = H, org. group; R3 = carboxy or sulfo deriv.) are useful as reducing agents which do not release HCHO. The sulfonic acids are obtained from aldehydes and Na dithionite and may be used in redox polymn. catalysts, in bleaching of kaolin, in textile printing and bleaching, and in deinking. In an example, Na hydrosulfite and glyoxylic acid gave 2-hydroxy-2-sulfinatoacetic acid di-Na salt in 95% yield.  
ST sulfonic acid prodn aldehyde dithionite addn; formaldehyde free reducing agent sulfinate; bleaching agent redox polymn catalyst sulfinate  
IT Bleaching agents  
Reducing agents  
(formaldehyde-free; prodn. of sulfonic acids and their salts for)  
IT Kaolin, processes  
RL: PEP (Physical, engineering or chemical process); PROC (Process)  
(sulfonic acids and their salts as bleaching agents for)  
IT Deinking  
(sulfonic acids and their salts as formaldehyde-free bleaching agents for)  
IT Pulp bleaching  
Redox polymerization catalysts  
Textile printing  
(sulfonic acids and their salts as formaldehyde-free reducing agents in)  
IT **4657-11-8P 33402-67-4P 223106-69-2P**  
RL: BYP (Byproduct); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(in reducing agent mixts. with sulfonic acid salts)  
IT **4445-76-5 7757-83-7, Sodium sulfite 29736-24-1**  
**223106-71-6**  
RL: TEM (Technical or engineered material use); USES (Uses)  
(in reducing agent mixts. with sulfonic acid salts)  
IT **223106-28-3P 223106-33-0P 223106-41-0P**  
**223106-47-6P 223106-52-3P 223106-57-8P**  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(prodn. of sulfonic acids and their salts as formaldehyde-free reducing agents)  
IT 90-02-8, reactions 113-24-6, Sodium pyruvate 123-11-5, 4-Methoxybenzaldehyde, reactions 298-12-4, Glyoxylic acid 7446-09-5, Sulfur dioxide, reactions 7775-14-6, Sodium hydrosulfite 7779-86-4, Zinc dithionite  
RL: RCT (Reactant)  
(starting material; prodn. of sulfonic acids and their salts as formaldehyde-free reducing agents)  
IT 24937-78-8P, EVA polymer  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(sulfonic acids and their salts as redox polymn. catalysts for prodn. of)  
IT **4657-11-8P 33402-67-4P 223106-69-2P**  
RL: BYP (Byproduct); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(in reducing agent mixts. with sulfonic acid salts)  
RN 4657-11-8 HCAPLUS  
CN Propanoic acid, 2-hydroxy-2-sulfo-, disodium salt (9CI) (CA INDEX NAME)





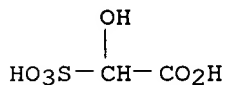
● 2 Na

RN 33402-67-4 HCAPLUS  
 CN Benzenemethanesulfonic acid, .alpha.-hydroxy-4-methoxy-, monosodium salt  
 (9CI) (CA INDEX NAME)



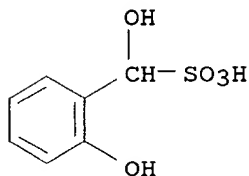
● Na

RN 223106-69-2 HCAPLUS  
 CN Acetic acid, hydroxysulfo-, zinc salt (1:1) (9CI) (CA INDEX NAME).



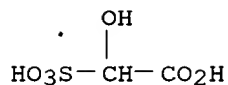
● Zn

IT **4445-76-5 29736-24-1 223106-71-6**  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (in reducing agent mixts. with sulfinic acid salts)  
 RN 4445-76-5 HCAPLUS  
 CN Benzenemethanesulfonic acid, .alpha.,2-dihydroxy-, monosodium salt (9CI)  
 (CA INDEX NAME)



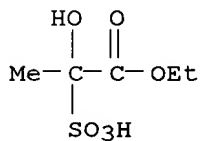
● Na

RN 29736-24-1 HCAPLUS  
 CN Acetic acid, hydroxysulfo-, disodium salt (9CI) (CA INDEX NAME)



● 2 Na

RN 223106-71-6 HCAPLUS

CN Propanoic acid, 2-hydroxy-2-sulfo-, 1-ethyl ester, monosodium salt (9CI)  
(CA INDEX NAME)

● Na

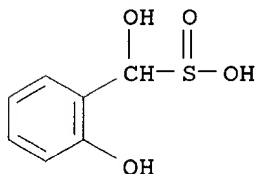
IT 223106-28-3P 223106-33-0P 223106-41-0P

223106-47-6P 223106-52-3P 223106-57-8P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(prodn. of sulfinic acids and their salts as formaldehyde-free reducing agents)

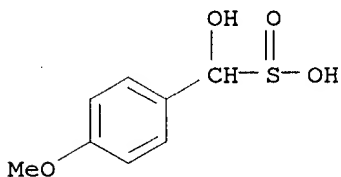
RN 223106-28-3 HCAPLUS

CN Benzenemethanesulfinic acid, .alpha.,2-dihydroxy-, monosodium salt (9CI)  
(CA INDEX NAME)

● Na

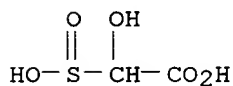
RN 223106-33-0 HCAPLUS

CN Benzenemethanesulfinic acid, .alpha.-hydroxy-4-methoxy-, monosodium salt (9CI) (CA INDEX NAME)



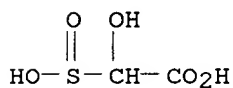
● Na

RN 223106-41-0 HCAPLUS **Best Available Copy**  
CN Acetic acid, hydroxysulfinic-, disodium salt (9CI) (CA INDEX NAME)



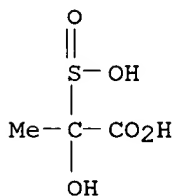
● 2 Na

RN 223106-47-6 HCAPLUS  
CN Acetic acid, hydroxysulfinic-, zinc salt (1:1) (9CI) (CA INDEX NAME)



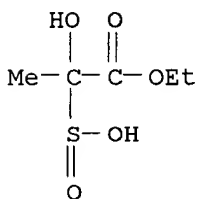
● Zn

RN 223106-52-3 HCAPLUS  
CN Propanoic acid, 2-hydroxy-2-sulfinic-, disodium salt (9CI) (CA INDEX NAME)



● 2 Na

RN 223106-57-8 HCAPLUS  
CN Propanoic acid, 2-hydroxy-2-sulfinic-, 1-ethyl ester, monosodium salt (9CI)  
(CA INDEX NAME)

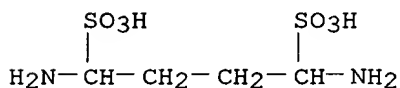


● Na

L10 ANSWER 4 OF 5 HCAPLUS COPYRIGHT 2000 ACS  
AN 1994:633459 HCAPLUS  
DN 121:233459  
TI Chrome and(or) vegetable tanning of grain hides for use in footwear  
IN Piwko, Czeslaw Z.

PA Instytut Barwnikow i Substancji Organicznych, Pol.  
 SO Pol., 7 pp. Abstracted and indexed from the unexamined application.  
 CODEN: POXXA7  
 DT Patent  
 LA Polish  
 IC ICM C14C003-00  
 ICS C14C001-00  
 CC 45-2 (Industrial Organic Chemicals,  
 Leather, Fats, and Waxes)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	PL 161502	B2	19930630	PL 1989-283871	19891220
	PL 161502	B1	19930630		
AB	In the title processes amino arom. [i.e., contg. benzene and(or) naphthalene rings] and(or) C1-6 aliph. sulfonic acids optionally contg. CO <sub>2</sub> H, OH, Cl, NO <sub>2</sub> , NH <sub>4</sub> , and(or) C1-12 alkyl groups are used at any stage to replace pickling and eliminate the NaCl treatment. Thus, calf hide was unhaired and limed 22-24 h in a bath contg. 70% m-diaminobenzenesulfonic acid (I) 0.3-0.5, Ca(OH) <sub>2</sub> 1.5-2, Na <sub>2</sub> S 2-3, and enzyme tannage 0.2-0.4 at bath ratio 200%, pickled in a bath contg. 0.1-2% 70% I having pH 4.5-5.5, chrome tanned, dyed, and fat-liquored to give leather for footwear.				
ST	amino sulfonic acid tanning grain hide; aminobenzenesulfonic acid tanning grain hide; footwear leather amino sulfonic acid tanning				
IT	Tanning (in presence of amino sulfonic acids, to eliminate sodium chloride treatment and replace pickling)				
IT	Footwear (tanning hides for, in presence of amino sulfonic acids)				
IT	Sulfonic acids, uses RL: TEM (Technical or engineered material use); USES (Uses) (amino, tanning in presence of, to eliminate sodium chloride treatment and replace pickling)				
IT	Phenolic resins, uses RL: TEM (Technical or engineered material use); USES (Uses) (sulfo-contg., tanning in presence of, to eliminate sodium chloride treatment and replace pickling)				
IT	50-00-0D, Formaldehyde, polymers with sulfonated phenol and arom. sulfonic acids 1333-39-7D, Phenolsulfonic acid, polymers with formaldehyde and arom. sulfonic acids 5857-94-3 101901-86-4 <b>158518-94-6</b> RL: USES (Uses) (tanning in presence of, to eliminate sodium chloride treatment and replace pickling)				
IT	<b>158518-94-6</b> RL: USES (Uses) (tanning in presence of, to eliminate sodium chloride treatment and replace pickling)				
RN	158518-94-6 HCAPLUS				
CN	1,4-Butanedisulfonic acid, 1,4-diamino- (9CI) (CA INDEX NAME)				

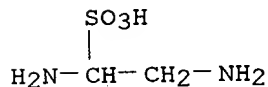


L10 ANSWER 5 OF 5 HCAPLUS COPYRIGHT 2000 ACS  
 AN 1993:541584 HCAPLUS  
 DN 119:141584  
 TI Process for fulling-tanning and/or retanning of leather with polyisocyanate polyaddition products  
 IN Traeubel, Harro; Dietrich, Manfred  
 PA Bayer A.-G., Germany  
 SO Eur. Pat. Appl., 10 pp.  
 CODEN: EPXXDW  
 DT Patent

IC ICM C14C003-18  
ICS C14C003-28; C08G018-08  
CC 45-2 (Industrial Organic Chemicals,  
Leather, Fats, and Waxes)

FAN.CNT 1

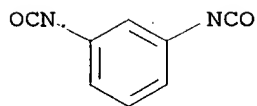
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 526815	A1	19930210	EP 1992-112678	19920724
	EP 526815	B1	19941130		
	R: CH, DE, ES, GB, IT, LI				
	DE 4125983	A1	19930211	DE 1991-4125983	19910806
	ES 2065116	T3	19950201	ES 1992-112678	19920724
	JP 05195000	A2	19930803	JP 1992-226547	19920804
PRAI	DE 1991-4125983		19910806		
AB	Aq. dispersions of polyisocyanate polyaddn. products optionally contg. ionic, hydrazodicarbonamide, urea, and/or urethane groups are useful for fulling-tanning and/or retanning of leather, giving good fullness, dyeability, and softness with good bath exhaustion and minimal wastewater generation. Ethylene oxide-propylene oxide copolymer trimethylolpropane ether, hydrazine, H <sub>2</sub> NCH <sub>2</sub> CH(SO <sub>3</sub> Na)NH <sub>2</sub> , and TDI were used in the prepn. of a polyaddn. product dispersion for treating leather.				
ST	isocyanate polyol fulling tanning leather; polyurea polyol fulling tanning leather; polyurethane polyol fulling tanning leather; retanning leather isocyanate polyol				
IT	Urethane polymers, uses				
	RL: USES (Uses)				
	(polyurea-, fulling-tanning and retanning materials, for leather)				
IT	Tanning materials				
	(re-, fulling and, polyisocyanate polyaddn. products as, for leather)				
IT	26747-03-5P 149925-42-8P 149925-43-9P 149925-44-0P				
	149973-05-7P				
	RL: PREP (Preparation)				
	(prepn. and use for fulling-tanning and retanning of leather)				
IT	149925-42-8P 149925-43-9P				
	RL: PREP (Preparation)				
	(prepn. and use for fulling-tanning and retanning of leather)				
RN	149925-42-8 HCAPLUS				
CN	Ethanesulfonic acid, 1,2-diamino-, monosodium salt, polymer with 1,3-diisocyanatomethylbenzene, hydrazine and methyloxirane polymer with oxirane ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1) (9CI) (CA INDEX NAME)				
CM	1				
CRN	149925-41-7				
CMF	C2 H8 N2 O3 S . Na				



● Na

CM 2

CRN 26471-62-5  
CMF C9 H6 N2 O2  
CCI IDS  
CDES 8:ID



D1-Me

CM 3

CRN 302-01-2  
CMF H4 N2

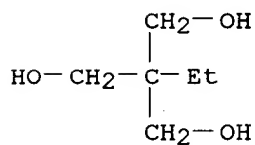
H<sub>2</sub>N-NH<sub>2</sub>

CM 4

CRN 52624-57-4  
CMF C6 H14 O3 . 3 (C3 H6 O . C2 H4 O)x  
CDES 8:GD,ETHER

CM 5

CRN 77-99-6  
CMF C6 H14 O3

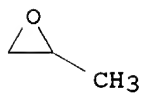


CM 6

CRN 9003-11-6  
CMF (C3 H6 O . C2 H4 O)x  
CCI PMS

CM 7

CRN 75-56-9  
CMF C3 H6 O



CM 8

CRN 75-21-8  
CMF C2 H4 O

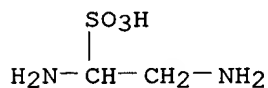




RN 149925-43-9 HCAPLUS  
 CN Ethanesulfonic acid, 1,2-diamino-, monosodium salt, polymer with  
 1,3-diisocyanatomethylbenzene, hydrazine, methyloxirane and oxirane (9CI)  
 (CA INDEX NAME)

CM 1

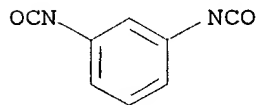
CRN 149925-41-7  
 CMF C2 H8 N2 O3 S . Na



● Na

CM 2

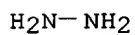
CRN 26471-62-5  
 CMF C9 H6 N2 O2  
 CCI IDS  
 CDES 8:ID



D1-Me

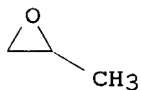
CM 3

CRN 302-01-2  
 CMF H4 N2



CM 4

CRN 75-56-9  
 CMF C3 H6 O



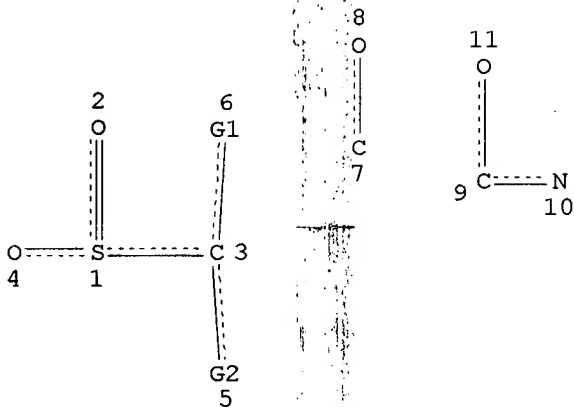
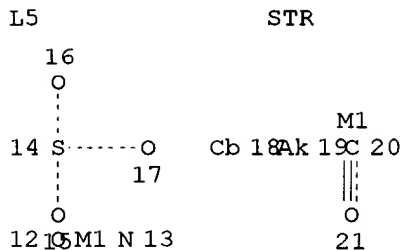
CM 5

CRN 75-21-8  
CMF C2 H4 O





Hardee 09/319,108



VAR G1=12/13

VAR G2=14/18/19/20/7/9

## NODE ATTRIBUTES:

HCOUNT	IS	M1	AT	12
HCOUNT	IS	M1	AT	20
NSPEC	IS	C	AT	1
NSPEC	IS	C	AT	2
NSPEC	IS	C	AT	3
NSPEC	IS	C	AT	4
NSPEC	IS	C	AT	5
NSPEC	IS	C	AT	6
NSPEC	IS	C	AT	7
NSPEC	IS	C	AT	8
NSPEC	IS	C	AT	9
NSPEC	IS	C	AT	10
NSPEC	IS	C	AT	11

DEFAULT MLEVEL IS ATOM

MLEVEL	IS	CLASS	AT	1	2	3	4	7	8	9	10	11	12	13	14	15	16	17	18	19
				20	21															

DEFAULT ECLEVEL IS LIMITED

## GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 21

## STEREO ATTRIBUTES: NONE

L7	1916	SEA	FILE=REGISTRY	SSS	FUL	L5
L8	977	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L7
L9	73568	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(INDUSTRIAL ORGANIC CHEMICALS, LEATHER, FATS, AND WAXES)/SC,SX
L10	5	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L8 AND L9
L13	187	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	REDUC? AND L8
L14	20	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(POLYMER? OR PLASTIC?) AND L13
L15	19	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L14 NOT L10

Hardee 09/319,108

L15 ANSWER 1 OF 19 HCAPLUS COPYRIGHT 2000 ACS

AN 1999:819065 HCAPLUS

DN 132:50441

TI Process for removing residual volatile components from **polymer** dispersions

IN Dobbelaar, Johannes; Hbinger, Wolfgang; Keller, Peter; Stanger, Bernd

PA Basf A.-G., Germany

SO Eur. Pat. Appl., 7 pp.

CODEN: EPXXDW

DT Patent

LA German

IC ICM C08F006-00

CC 35-8 (Chemistry of Synthetic High Polymers)

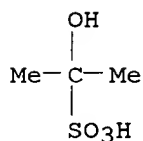
Section cross-reference(s): 38, 43

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 967232	A1	19991229	EP 1999-112059	19990622
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	DE 19828183	A1	19991230	DE 1998-19828183	19980624
PRAI	DE 1998-19828183		19980624		
AB	Residual volatile components are removed from <b>polymer</b> dispersions by treatment with an initiator, esp. a redox initiator system, for removal of residual monomers (chem. deodorization) and then treatment with an inert gas for removal of volatile constituents (phys. deodorization). The chem. deodorization is carried out as long as the decrease in residual monomer content is greater than the increase of secondary components introduced into the dispersion through the initiator. Thus, a Bu acrylate-acrylonitrile copolymer dispersion, produced by emulsion <b>polymn.</b> for adhesive applications and contg. 9800 ppm residual volatile components (800 ppm satd. non- <b>polymerizable</b> impurities and 9000 ppm residual monomers, mainly Bu acrylate), was chem. deodorized at 70.degree. using a tert-Bu hydroperoxide/acetone bisulfite initiator system. The treatment was continued until the monomer content fell to 900 ppm and the secondary components introduced by the redox initiator system was .apprx.500 ppm (60 min). The dispersion was then treated with steam to <b>reduce</b> the content of residual volatile components to 44 ppm.				
ST	acrylic <b>polymer</b> dispersion removal residual volatile; deodorization acrylic <b>polymer</b> dispersion; redox initiator chem deodorization <b>polymer</b> dispersion; phys deodorization <b>polymer</b> dispersion inert gas				
IT	Adhesives (acrylic <b>polymer</b> dispersion for; removing residual volatile components from <b>polymer</b> dispersions by chem. deodorization using redox initiator systems and subsequent phys. deodorization with inert gas)				
IT	Paper (coating, vinyl compd. <b>polymer</b> ; removing residual volatile components from <b>polymer</b> dispersions by chem. deodorization using redox initiator systems and subsequent phys. deodorization with inert gas)				
IT	Deodorization Steam (removing residual volatile components from <b>polymer</b> dispersions by chem. deodorization using redox initiator systems and subsequent phys. deodorization with inert gas)				
IT	Coating materials (vinyl compd. <b>polymer</b> , for paper; removing residual volatile components from <b>polymer</b> dispersions by chem. deodorization				

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using redox initiator subsequent phys. deodorization with inert gas)

- IT 7785-42-4, Acetone bisulfite  
RL: CAT (Catalyst use); USES (Uses)  
(catalyst; removing residual volatile components from **polymer** dispersions by chem. deodorization using redox initiator systems and subsequent phys. deodorization with an inert gas)
- IT 75-91-2, tert-Butyl hydroperoxide 79-25-4, Hydroxymethanesulfinic acid  
RL: CAT (Catalyst use); USES (Uses)  
(catalyst; removing residual volatile components from **polymer** dispersions by chem. deodorization using redox initiator systems and subsequent phys. deodorization with inert gas)
- IT 25567-76-4, Acrylonitrile-butyl acrylate copolymer  
RL: PEP (Physical, engineering or chemical process); PROC (Process)  
(dispersion, for adhesive applications; removing residual volatile components from **polymer** dispersions by chem. deodorization using redox initiator systems and subsequent phys. deodorization with inert gas)
- IT 25838-20-4, Butadiene-butyl acrylate-styrene copolymer  
RL: PEP (Physical, engineering or chemical process); PROC (Process)  
(dispersion, for paper coating; removing residual volatile components from **polymer** dispersions by chem. deodorization using redox initiator systems and subsequent phys. deodorization with inert gas)
- RE.CNT 4  
RE  
(1) Basf Ag; DE 19621027 A 1997  
(2) Basf Ag; DE 19741189 A 1999  
(3) Isr Holding Sarl; EP 0003957 A 1979 HCAPLUS  
(4) Nat Starch Chem Invest; EP 0650977 A 1995
- IT 7785-42-4, Acetone bisulfite  
RL: CAT (Catalyst use); USES (Uses)  
(catalyst; removing residual volatile components from **polymer** dispersions by chem. deodorization using redox initiator systems and subsequent phys. deodorization with an inert gas)
- RN 7785-42-4 HCAPLUS  
CN 2-Propanesulfonic acid, 2-hydroxy- (6CI, 8CI, 9CI) (CA INDEX NAME)



- L15 ANSWER 2 OF 19 HCAPLUS COPYRIGHT 2000 ACS  
AN 1999:243165 HCAPLUS  
DN 130:352896  
TI Forces in foam films containing polyelectrolyte and surfactant  
AU Klitzing, R. v.; Espert, A.; Asnacios, A.; Hellweg, T.; Colin, A.; Langevin, D.  
CS Centre de Recherche Paul Pascal (CNRS), Pessac, F-33600, Fr.  
SO Colloids Surf., A (1999), 149(1-3), 131-140  
CODEN: CPEAEH; ISSN: 0927-7757  
PB Elsevier Science B.V.  
DT Journal  
LA English  
CC 36-6 (Physical Properties of Synthetic High Polymers)  
Section cross-reference(s): 66  
AB Foam films of semi-dil. anionic polyelectrolyte solns. contg. addnl. the cationic surfactant dodecyltrimethylammonium bromide are investigated. The polyelectrolytes used are polystyrene sulfonate (PSS) and acrylamide-acrylamide sulfonate (AAS) copolymer as examples of strongly and weakly charged polyions, resp. The disjoining pressure isotherm results in film stratification well below the crit. micelle concn. (CMC) and the crit. aggregate concn. (CAC). These pressure oscillations are

related to a network of polyelectrolyte chains in the film bulk, and their period to the mesh size. The network can be described by the theory for semi-dil. polyelectrolyte solns., which is different for the two polyelectrolytes because of different charge densities along the chain. The surfactant has no observable influence on the network. To obtain information about the film interface surface tension measurements at the water-air interface are carried out. In comparison with the pure polyelectrolyte and the surfactant, resp., the surface tension is much **reduced** for the mixed systems as a result of the formation of complexes between the surfactant and the polyelectrolyte. The two **polymers** show different behavior in satn. of the surface coverage, which leads us to the conclusion that the complexes are different, although the behavior of the film bulk is not influenced by changes in the interface.

ST polyelectrolyte surfactant complexation foam film stratification

IT Cationic surfactants

Disjoining pressure

Foams

**Plastic** films

Polyelectrolytes

Surface tension

Viscosity

(forces in foam films contg. polyelectrolyte and surfactant)

IT **Polymer** morphology

(stratification; forces in foam films contg. polyelectrolyte and surfactant)

IT 1119-94-4, Dodecyltrimethylammonium bromide 9080-79-9, Polystyrene sulfonate sodium salt **112727-47-6**

RL: PEP (Physical, engineering or chemical process); PROC (Process)

(forces in foam films contg. polyelectrolyte and surfactant)

RE.CNT 39

RE

- (1) Asnacios, A; Macromolecules 1996, V29, P7412 HCAPLUS
- (2) Asnacios, A; Phys Rev Lett 1997, V78, P4974 HCAPLUS
- (3) Barrat, J; Adv Chem Phys 1996, V94, P1 HCAPLUS
- (4) Bergeron, V; Colloid Polym Sci 1995, V273, P165 HCAPLUS
- (5) Bergeron, V; Langmuir 1992, V8, P3020 HCAPLUS
- (6) Bergeron, V; Langmuir 1992, V8, P3027 HCAPLUS
- (7) Bergeron, V; Langmuir 1996, V12, P1336 HCAPLUS
- (8) Bergeron, V; Langmuir 1996, V12, P1550 HCAPLUS
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- (15) Exerowa, D; Chim Phys 1971, V24, P47
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- (29) Nierlich, M; J Phys France 1979, V40, P701 HCAPLUS
- (30) Odijk, T; J Polym Sci Polym Phys Ed 1977, V15, P477 HCAPLUS
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 (36) Scheludko, A; Adv Colloid Interface Sci 1967, V1, P391  
 (37) Sedlak, M; J Chem Phys 1992, V96, P817 HCAPLUS  
 (38) Skolnick, J; Macromolecules 1977, V10, P944 HCAPLUS  
 (39) Sonin, A; Europhys Lett 1993, V22, P271 HCAPLUS

IT 112727-47-6

RL: PEP (Physical, engineering or chemical process); PROC (Process)  
 (forces in foam films contg. polyelectrolyte and surfactant)

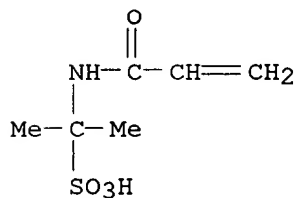
RN 112727-47-6 HCAPLUS

CN 2-Propanesulfonic acid, 2-[(1-oxo-2-propenyl)amino]-, polymer with  
 2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 69418-27-5

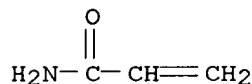
CMF C6 H11 N O4 S



CM 2

CRN 79-06-1

CMF C3 H5 N O



L15 ANSWER 3 OF 19 HCAPLUS COPYRIGHT 2000 ACS

AN 1998:603275 HCAPLUS

DN 129:231947

TI Composition and method for continuous dyeing with vat dyes

IN Krueger, Rudolf; Suetsch, Franz; Beckmann, Eberhard; Steidel, Volker

PA BASF A.-G., Germany

SO Ger. Offen., 4 pp.

CODEN: GWXXBX

DT Patent

LA German

IC ICM D06P001-22

ICS D06M015-263; D06M015-09; D06P005-15; D06L003-10

ICA C09B007-02; C09B005-48; C09B049-00; D06L001-14

CC 40-6 (Textiles and Fibers)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19708972	A1	19980910	DE 1997-19708972	19970305
AB	Fibers are continuously dyed with vat dyes in baths contg. .gtoreq.1 sizing agent (such as a polyacrylate) and .gtoreq.1 <b>reducing</b> agent (such as thiourea dioxide and .alpha.-hydroxyethanesulfinic acid).				
ST	vat dye fiber dyeing sizing agent; hydroxyethanesulfinic acid vat dye dyeing fiber; thiourea dioxide vat dye dyeing fiber; polyacrylate vat dye dyeing fiber; <b>reducing</b> agent fiber dyeing vat dye				
IT	Dyeing <b>Reducing</b> agents Sizes (agents)				

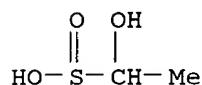
(compn. and method for continuous dyeing with vat dyes in presence of sizing agents)

IT 1758-73-2, Thiourea dioxide **4378-66-9**  
 RL: RCT (Reactant)  
 (**reducing** agent; compn. and method for continuous dyeing with vat dyes in presence of sizing agents)

IT 79-10-7D, Acrylic acid, esters, **polymers** 9004-32-4,  
 Carboxymethyl cellulose  
 RL: NUU (Nonbiological use, unclassified); USES (Uses)  
 (sizing agent; compn. and method for continuous dyeing with vat dyes in presence of sizing agents)

IT **4378-66-9**  
 RL: RCT (Reactant)  
 (**reducing** agent; compn. and method for continuous dyeing with vat dyes in presence of sizing agents)

RN 4378-66-9 HCAPLUS  
 CN Ethanesulfinic acid, 1-hydroxy- (8CI, 9CI) (CA INDEX NAME)



L15 ANSWER 4 OF 19 HCAPLUS COPYRIGHT 2000 ACS  
 AN 1998:425772 HCAPLUS  
 DN 129:109349  
 TI Kinetics and **polymerization** characteristics for some polyvinyl acetate emulsions prepared by different redox pair initiation systems  
 AU Shaffei, K. A.; Ayoub, M. M. H.; Ismail, M. N.; Badran, A. S.  
 CS Chemistry Department, Faculty Science, Helwan University, Cairo, Egypt  
 SO Eur. Polym. J. (1998), 34(3-4), 553-556  
 CODEN: EUPJAG; ISSN: 0014-3057  
 PB Elsevier Science Ltd.  
 DT Journal  
 LA English  
 CC 35-3 (Chemistry of Synthetic High Polymers)  
 AB The emulsion **polymn.** of vinyl acetate was carried out using various NaHSO3 adducts as **reducing** agents and K2S2O8 as oxidizing agent at low temp. The **polymn.** evaluation was followed by taking samples at regular intervals. The av. vol. diams., the areas and the no. of **polymer** particles per unit vol. of water for some prepd. emulsion latices were calcd. with the aid of TEM and image analyzer techniques. The **polymn.** rate and emulsion particle size were detd. for each redox pair initiator.  
 ST vinyl acetate emulsion **polymn** redox initiator; kinetics vinyl acetate emulsion **polymn**  
 IT Emulsion **polymerization** catalysts  
 Emulsion **polymerization** kinetics  
 (kinetics of emulsion **polymn.** of vinyl acetate using various carbonyl compd.-NaHSO3 adduct/K2S2O8 redox initiators)  
 IT Particle size  
**Polymer** morphology  
 (of poly(vinyl acetate) emulsions prepd. using various carbonyl compd.-NaHSO3 adduct/K2S2O8 redox initiators)  
 IT **540-92-1 918-04-7**, Acetaldehyde-sodium bisulfite adduct  
**4657-12-9**, Benzaldehyde-sodium bisulfite adduct 7727-21-1,  
 Potassium persulfate 13489-81-1, Cyclohexanone-sodium bisulfite adduct  
**36609-96-8**, Octanaldehyde-sodium bisulfite adduct  
**55620-40-1**, Salicylaldehyde-sodium bisulfite adduct  
**92335-61-0**, Methyl propyl ketone-sodium bisulfite adduct  
 RL: CAT (Catalyst use); USES (Uses)  
 (kinetics of emulsion **polymn.** of vinyl acetate using various carbonyl compd.-NaHSO3 adduct/K2S2O8 redox initiators)  
 IT 108-05-4, Vinyl acetate, reactions  
 RL: PEP (Physical, engineering or chemical process); RCT (Reactant); PROC

(Process)

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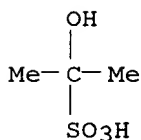
(kinetics of emulsion **polymn.** of vinyl acetate using various carbonyl compd.-NaHSO<sub>3</sub> adduct/K<sub>2</sub>S<sub>2</sub>O<sub>8</sub> redox initiators)

IT 9003-20-7P, Poly(vinyl acetate)  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(prepn. by emulsion **polymn.** using various carbonyl compd.-NaHSO<sub>3</sub> adduct/K<sub>2</sub>S<sub>2</sub>O<sub>8</sub> redox initiators)

IT 540-92-1 918-04-7, Acetaldehyde-sodium bisulfite adduct  
4657-12-9, Benzaldehyde-sodium bisulfite adduct 36609-96-8  
, Octanaldehyde-sodium bisulfite adduct 55620-40-1,  
Salicylaldehyde-sodium bisulfite adduct 92335-61-0, Methyl  
propyl ketone-sodium bisulfite adduct  
RL: CAT (Catalyst use); USES (Uses)  
(kinetics of emulsion **polymn.** of vinyl acetate using various carbonyl compd.-NaHSO<sub>3</sub> adduct/K<sub>2</sub>S<sub>2</sub>O<sub>8</sub> redox initiators)

RN 540-92-1 HCAPLUS

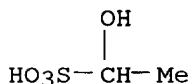
CN 2-Propanesulfonic acid, 2-hydroxy-, monosodium salt (8CI, 9CI) (CA INDEX NAME)



● Na

RN 918-04-7 HCAPLUS

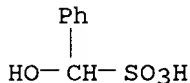
CN Ethanesulfonic acid, 1-hydroxy-, monosodium salt (8CI, 9CI) (CA INDEX NAME)



● Na

RN 4657-12-9 HCAPLUS

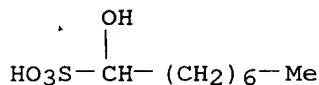
CN Benzenemethanesulfonic acid, .alpha.-hydroxy-, monosodium salt (9CI) (CA INDEX NAME)



● Na

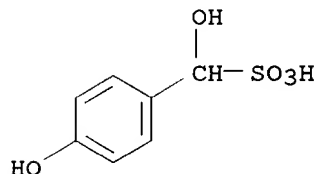
RN 36609-96-8 HCAPLUS

CN 1-Octanesulfonic acid, 1-hydroxy-, monosodium salt (9CI) (CA INDEX NAME)



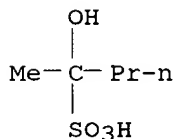
● Na

RN 55620-40-1 HCAPLUS  
 CN Benzenemethanesulfonic acid, .alpha.,4-dihydroxy-, monosodium salt (9CI)  
 (CA INDEX NAME)



● Na

RN 92335-61-0 HCAPLUS  
 CN 2-Pentanesulfonic acid, 2-hydroxy-, monosodium salt (9CI) (CA INDEX NAME)



● Na

L15 ANSWER 5 OF 19 HCAPLUS COPYRIGHT 2000 ACS  
 AN 1997:683130 HCAPLUS  
 DN 127:319321  
 TI The course of emulsion **polymerization** of vinyl acetate using redox systems of different oxidizing agents  
 AU Shaffie, K. A.; Moustafa, A. B.; Mohamed, E. S.; Badran, A. S.  
 CS Chemistry Department, Faculty of Science, Helwan University, Cairo, Egypt  
 SO J. Polym. Sci., Part A: Polym. Chem. (1997), 35(15), 3141-3149  
 CODEN: JPACEC; ISSN: 0887-624X  
 PB Wiley  
 DT Journal  
 LA English  
 CC 35-3 (Chemistry of Synthetic High Polymers)  
 AB The emulsion **polymn.** of vinyl acetate was carried out using redox initiation systems contg. various persulfates; i.e., K2S2O8, Na2S2O8, and (NH4)2S2O8; each coupled with acetone sodium bisulfite adduct as **reducing** agent. The rate of **polymn.** was dependent on the initiator concn. to the powers 1.04, 1.02, and 0.34, resp. The effect of the various cations on the stability of the prepd. emulsion lattices was investigated using the sedimentation method. The effect of the cations on the morphol. characteristics of the lattices also was studied. The activation energies were detd.  
 ST vinyl acetate redox **polymn** kinetics; persulfate catalyst vinyl acetate **polymn**; emulsion redox **polymn** vinyl acetate



IT Redox **polymerization** Best Available Copy  
(emulsion; kinetics of emulsion redox **polymn.** of vinyl acetate using various persulfate/acetone bisulfite adduct catalysts)

IT Redox **polymerization**  
(kinetics, emulsion; of vinyl acetate using various persulfate/acetone bisulfite adduct catalysts)

IT Redox **polymerization**  
(mechanism of emulsion redox **polymn.** of vinyl acetate using various persulfate/acetone bisulfite adduct catalysts)

IT **Polymer** morphology  
(of poly(vinyl acetate) prepd. using various persulfate/acetone bisulfite adduct catalysts)

IT **Polymerization** kinetics  
(redox, emulsion; of vinyl acetate using various persulfate/acetone bisulfite adduct catalysts)

IT 540-92-1 7727-21-1, Potassium persulfate 7727-54-0, Ammonium persulfate 7775-27-1, Sodium persulfate  
RL: CAT (Catalyst use); USES (Uses)  
(kinetics of emulsion redox **polymn.** of vinyl acetate using various persulfate/acetone bisulfite adduct catalysts)

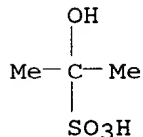
IT 108-05-4, Vinyl acetate, reactions  
RL: RCT (Reactant)  
(kinetics of emulsion redox **polymn.** of vinyl acetate using various persulfate/acetone bisulfite adduct catalysts)

IT 9003-20-7P, Poly(vinyl acetate)  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(prepn. using various persulfate/acetone bisulfite adduct catalysts)

IT 540-92-1  
RL: CAT (Catalyst use); USES (Uses)  
(kinetics of emulsion redox **polymn.** of vinyl acetate using various persulfate/acetone bisulfite adduct catalysts)

RN 540-92-1 HCAPLUS

CN 2-Propanesulfonic acid, 2-hydroxy-, monosodium salt (8CI, 9CI) (CA INDEX NAME)

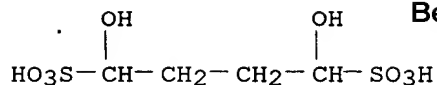


● Na

L15 ANSWER 6 OF 19 HCAPLUS COPYRIGHT 2000 ACS  
AN 1997:467690 HCAPLUS  
DN 127:95729  
TI Redox catalysts for emulsion **polymerization**  
IN Jakob, Martin  
PA Hoechst A.-G., Germany  
SO Eur. Pat. Appl., 10 pp.  
CODEN: EPXXDW  
DT Patent  
LA German  
IC ICM C08F004-40  
ICS C09J157-00  
CC 35-3 (Chemistry of Synthetic High Polymers)  
Section cross-reference(s): 67  
FAN.CNT 1

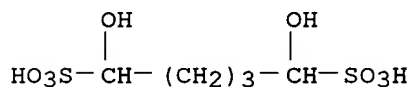
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 778290	A2	19970611	EP 1996-119133	19961129
	EP 778290	A3	19970910		

EP 778290 B1 **Best Available Copy**  
R: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LI, NL, PT, SE  
DE 19545609 A1 19970612 DE 1995-19545609 19951207  
AT 182155 E 19990715 AT 1996-119133 19961129  
ES 2135154 T3 19991016 ES 1996-119133 19961129  
US 5744418 A 19980428 US 1996-759831 19961204  
JP 09176217 A2 19970708 JP 1996-327206 19961206  
US 5969065 A 19991019 US 1998-67840 19980427  
PRAI DE 1995-19545609 19951207  
US 1996-759831 19961204  
AB The title catalysts, useful in the prepn. of **polymer** emulsions for use as HCHO-free adhesives, contain oxidants and, as **reductants**, multifunctional, fully blocked adducts of C.g.toreq.3 aldehydes with NaHSO3. Emulsion **polymn.** of 3650 g vinyl acetate in the presence of 1.45 g tert-BuOOH and 31.7 g glutaraldehyde NaHSO3 adduct (1:2) at 67-80.degree. gave a 51.7% **polymer** emulsion with viscosity 26.3 Pa-s at 23.degree. and free HCHO content 3 ppm. The use of this emulsion in the bonding of wood is exemplified.  
ST redox catalyst emulsion **polymn.**; aldehyde bisulfite adduct catalyst **polymn.**; glutaraldehyde bisulfite adduct catalyst **polymn.**; adhesive formaldehyde free **polymer** emulsion; polyvinyl acetate emulsion manuf catalyst  
IT Redox **polymerization** catalysts  
(emulsion, hydroperoxides-aldehyde bisulfites; redox catalysts for emulsion **polymn.**)  
IT Vinyl **polymers**  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(ester group-contg.; redox catalysts for emulsion **polymn.** in manuf. of vinyl **polymers**)  
IT Aldehydes, uses  
RL: CAT (Catalyst use); USES (Uses)  
(multifunctional, bisulfite adducts; redox catalysts for emulsion **polymn.**)  
IT Hydroperoxides  
RL: CAT (Catalyst use); USES (Uses)  
(redox catalysts for emulsion **polymn.**)  
IT Binders  
(redox catalysts for emulsion **polymn.** in manuf. of binders)  
IT Adhesives  
(redox catalysts for emulsion **polymn.** in manuf. of formaldehyde-free adhesives)  
IT Wood  
(redox catalysts for emulsion **polymn.** in manuf. of formaldehyde-free adhesives for wood bonding)  
IT Vinyl **polymers**  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(redox catalysts for emulsion **polymn.** in manuf. of vinyl **polymers**)  
IT Emulsion **polymerization** catalysts  
(redox, hydroperoxides-aldehyde bisulfites; redox catalysts for emulsion **polymn.**)  
IT 75-91-2, tert-Butyl hydroperoxide **5450-96-4 7420-89-5**  
RL: CAT (Catalyst use); USES (Uses)  
(redox catalysts for emulsion **polymn.**)  
IT 9003-20-7P, Poly(vinyl acetate)  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(redox catalysts for emulsion **polymn.** in manuf. of poly(vinyl acetate))  
IT **5450-96-4 7420-89-5**  
RL: CAT (Catalyst use); USES (Uses)  
(redox catalysts for emulsion **polymn.**)  
RN 5450-96-4 HCAPLUS  
CN 1,4-Butanedisulfonic acid, 1,4-dihydroxy-, disodium salt (7CI, 8CI, 9CI)  
(CA INDEX NAME)



●2 Na

RN 7420-89-5 HCAPLUS  
 CN 1,5-Pentanedisulfonic acid, 1,5-dihydroxy-, disodium salt (7CI, 8CI, 9CI)  
 (CA INDEX NAME)



●2 Na

L15 ANSWER 7 OF 19 HCAPLUS COPYRIGHT 2000 ACS  
 AN 1997:302978 HCAPLUS  
 DN 126:278278  
 TI Low VOC emulsion of acrylic **polymers** and redox initiator system  
 for its manufacture  
 IN Sempio, Carlo; Saija, Leo Mario; Becchi, Daniele; Montessoro, Ezio  
 PA Elf Atochem Italia S.R.L., Italy  
 SO Eur. Pat. Appl., 17 pp.  
 CODEN: EPXXDW

DT Patent  
 LA English  
 IC ICM C08F006-00  
 CC 37-3 (Plastics Manufacture and Processing)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 767180	A1	19970409	EP 1996-115707	19961001
	EP 767180	B1	19990602		
	R: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LI, NL, PT, SE				
	AT 180792	E	19990615	AT 1996-115707	19961001
	ES 2134548	T3	19991001	ES 1996-115707	19961001
	US 5721310	A	19980224	US 1996-724869	19961003

PRAI IT 1995-MI2024 19951004  
 AB A dispersion or emulsion of acrylic **polymer** with total VOC  
 .ltoreq.600 ppm and residual monomer .ltoreq.100 ppm is manufd. by using a  
 redox couple as monomer **redn.** phase which is composed of  
 ascorbic acid or a water-sol. (.gtoreq.5%), C.gtoreq.4 aldehyde having  
 salifiable hydrogen or its salt as the **redn.** agent and a  
 hydroperoxide or its salt as the oxidn. agent. Thus, an emulsion of  
 styrene 53, Bu acrylate 45 and acrylic acid 2% was **polymd.** with  
 potassium persulfate initiator as monomer **redn.** phase A and then  
 a diisopropylbenzenedihydroperoxide sodium salt/glutaraldehyde hydrogen  
 sodium sulfite redox as **redn.** phase B to give a product showing  
 dry residue 50%, wet coagulum (.mu. 125 filter) 450, residual monomer 80  
 and VOC 500 ppm.

ST VOC low acrylic emulsion redox initiator; diisopropylbenzenedihydroperoxid  
 e glutaraldehyde salt **redn** acrylic VOC; monomer residual  
**redn** redox initiator

IT Redox **polymerization** catalysts  
 (emulsion; low VOC emulsion of acrylic **polymers** and the redox  
 initiator system for its manuf.)

IT Acrylic **polymers**, preparation  
 RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)

(low VOC emulsion **Best Available Copolymers** and redox initiator system for its manuf.)

IT Emulsion **polymerization** catalysts  
(redox; low VOC emulsion of acrylic **polymers** and the redox initiator system for its manuf.)

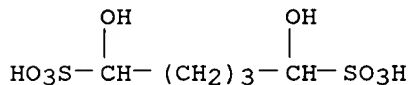
IT 50-81-7, Ascorbic acid, uses **7420-89-5**, Glutaraldehyde bisulfite  
7727-21-1, Potassium persulfate 28959-35-5 29014-32-2,  
Diisopropylbenzenedihydroperoxide 29880-89-5 29880-90-8,  
p-Diisopropylbenzene dihydroperoxide, disodium salt  
RL: CAT (Catalyst use); USES (Uses)  
(initiator; low VOC emulsion of acrylic **polymers** and redox initiator system for its manuf.)

IT 25586-20-3P, Acrylic acid-butyl acrylate-styrene copolymer  
RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)  
(low VOC emulsion of acrylic **polymers** and redox initiator system for its manuf.)

IT **7420-89-5**, Glutaraldehyde bisulfite  
RL: CAT (Catalyst use); USES (Uses)  
(initiator; low VOC emulsion of acrylic **polymers** and redox initiator system for its manuf.)

RN 7420-89-5 HCAPLUS

CN 1,5-Pentanedisulfonic acid, 1,5-dihydroxy-, disodium salt (7CI, 8CI, 9CI)  
(CA INDEX NAME)



●2 Na

L15 ANSWER 8 OF 19 HCAPLUS COPYRIGHT 2000 ACS  
AN 1991:682181 HCAPLUS  
DN 115:282181  
TI Thermosetting **polymer** food containers and their manufacture  
IN Niwa, Morihiko; Nakado, Yozo; Kawamura, Midori  
PA Meisei K. K., Japan  
SO Jpn. Kokai Tokkyo Koho, 4 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM A47G019-00  
ICS B05D007-00  
CC 42-10 (Coatings, Inks, and Related Products)  
Section cross-reference(s): 38

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 03085108	A2	19910410	JP 1989-222329	19890829
	JP 2733551	B2	19980330		

AB The food containers with good scratch and soil resistance are prepd. by contacting thermosetting **polymer** (e.g., melamine resin) containers with HCHO-absorbent-contg. fluoropolymer dispersions. Thus, soaking a melamine resin bowl in an aq. dispersion contg. PTFE and 1:2 glyoxal-NaHSO3 adduct at 40-45.degree. and 300 torr for 5 min, increasing the pressure to 1 atm, **reducing** to 300 torr for 5 min, washing with warm H2O, and drying at room temp. -40.degree. gave a containers showing no residual HCHO and good antisoiling.

ST antisoiling fluoro coating food container; glyoxal bisulfite adduct formaldehyde catch; melamine resin container fluoro coating

IT Coating materials  
(antisoiling, aq. fluoropolymer dispersions, contg. formaldehyde absorbents, for melamine resin food containers)

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IT 9002-84-0, PTFE  
 RL: USES (Uses)  
 (aq. coatings, contg. formaldehyde absorbents, for melamine resin food containers)

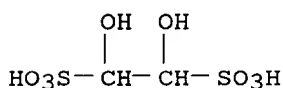
IT 9003-08-1, Formaldehyde-melamine copolymer  
 RL: USES (Uses)  
 (food containers, antisoiling coatings for, fluoropolymer dispersions contg. formaldehyde absorbents)

IT 57-13-6, Urea, uses and miscellaneous 105-45-3, Methyl acetoacetate  
 123-54-6, Acetylacetone, uses and miscellaneous 517-21-5  
 52143-74-5 70800-52-1 136541-55-4  
 RL: USES (Uses)  
 (formaldehyde absorbents, aq. fluoropolymer dispersions contg., as antisoiling coatings, for melamine resin food containers)

IT 517-21-5 70800-52-1  
 RL: USES (Uses)  
 (formaldehyde absorbents, aq. fluoropolymer dispersions contg., as antisoiling coatings, for melamine resin food containers)

RN 517-21-5 HCAPLUS

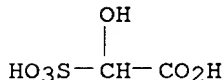
CN 1,2-Ethanedisulfonic acid, 1,2-dihydroxy-, disodium salt (7CI, 8CI, 9CI)  
 (CA INDEX NAME)



●2 Na

RN 70800-52-1 HCAPLUS

CN Acetic acid, hydroxysulfo-, sodium salt (9CI) (CA INDEX NAME)



●x Na

L15 ANSWER 9 OF 19 HCAPLUS COPYRIGHT 2000 ACS

AN 1991:594222 HCAPLUS

DN 115:194222

TI Developers for positive-working photoresists

IN Kawabe, Yasumasa; Akiyama, Keiji

PA Fuji Photo Film Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 11 pp.  
 CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G03F007-32

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 38

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 03087838	A2	19910412	JP 1989-224929	19890831
	JP 2589823	B2	19970312		

AB The title developers based on basic component contain alkali-sol. resins chosen from novolaks, acetone-pyrogallol resin, and **polymer** of

hydroxystyrene and iBest Available Copyrg. reducing agents.  
 Typical basic components are Me4NOH and Me3HOCH2CH2NOH, and the  
 reducing agents are hydrazines, hydrazides, carbazates,  
 semicarbazides, guanidines, hydroxamic acids, hydroxyurea, and glucose.  
 These developers do not produce surface peeling or scums and provide high  
 retention of resist thickness, are highly wetting and permeable to  
 resists, nonfoaming, and storage-stable. Thus, a Si wafer with a resist  
 layer contg. 5 parts m-cresol-p-cresol novolak and 1.25 parts  
 1,2-naphthoquinonediazide-5-sulfonate ester of 2,3,4,4'-  
 tetrahydroxybenzophenone was patternwise exposed and developed in a soln.  
 contg. Me4NOH 2.38, methylhydrazine 0.2, and m-cresol- p-cresol novolak  
 0.2 wt.%, with described advantages.

ST developer pos working photoresist additive

IT Phenolic resins, uses and miscellaneous

RL: USES (Uses)

(developers for pos.-working photoresists contg. reducing  
 agents and)

IT Resists

(photo-, pos.-working, developers for, alkali-sol. resins and  
 reducing agents as additives to)

IT 50-99-7, D-Glucose, uses and miscellaneous 57-14-7 60-34-4 79-17-4,  
 Hydrazinecarboximidamide 89-73-6 109-84-2 127-07-1 497-18-7,  
 Carbonic dihydrazide 546-88-3 637-33-2 996-98-5 1068-57-1  
 4364-78-7, Carbonimidic dihydrazide 14628-35-4 17696-95-6 19247-05-3  
 40685-92-5 136610-34-9 **136610-35-0**

RL: USES (Uses)

(developer for pos.-working photoresists contg. alkali-sol. resins and)

IT 75-59-2, Tetramethylammonium hydroxide 123-41-1, Trimethyl(2-  
 hydroxyethyl) ammonium hydroxide

RL: USES (Uses)

(developers for pos.-working photoresists contg. additives and)

IT 24979-70-2, Poly(p-hydroxystyrene) 25053-96-7 25086-36-6 26983-56-2  
 27029-76-1 35464-74-5 38333-84-5 112504-03-7, m-Cresol-p-cresol-  
 formaldehyde-3,5-xyleneol copolymer

RL: USES (Uses)

(developers for pos.-working photoresists contg. reducing  
 agents and)

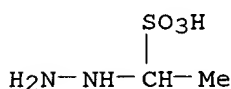
IT **136610-35-0**

RL: USES (Uses)

(developer for pos.-working photoresists contg. alkali-sol. resins and)

RN 136610-35-0 HCAPLUS

CN Ethanesulfonic acid, 1-hydrazino- (9CI) (CA INDEX NAME)



L15 ANSWER 10 OF 19 HCAPLUS COPYRIGHT 2000 ACS

AN 1986:581590 HCAPLUS

DN 105:181590

TI Image forming method

IN Hayakawa, Yoshihide; Satomura, Masato; Sato, Kozo

PA Fuji Photo Film Co., Ltd. , Japan

SO Eur. Pat. Appl., 51 pp.

CODEN: EPXXDW

DT Patent

LA English

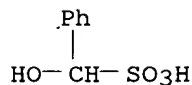
IC ICM G03C001-68

CC 74-7 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 174634	A2	19860319	EP 1985-111416	19850910

EP 174634 A3 **Best Available Copy**  
 EP 174634 B1 19871209  
 R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE  
 JP 61069062 A2 19860409 JP 1984-191353 19840912  
 JP 03012307 B4 19910219  
 JP 61073145 A2 19860415 JP 1984-195407 19840918  
 JP 03012308 B4 19910219  
 AT 31368 E 19871215 AT 1985-111416 19850910  
 US 4629676 A 19861216 US 1985-775273 19850912  
 PRAI JP 1984-191353 19840912  
 JP 1984-195407 19840918  
 EP 1985-111416 19850910  
 AB An image-forming method is comprised of imagewise exposing a  
 photosensitive compn. contg. a photosensitive Ag salt, a **reducing**  
 agent, a **polymerizable** compd., and a binder and uniformly  
 heating at .gtoreq.80.degree. to form a **polymer** layer in the  
 exposed area. Thus, a PET film support was coated with a dispersion  
 consisting of poly(vinylpyrrolidone) 3, acrylamide 2,  
 methylenebisacrylamide 0.25, Ag behenate (prepd. from behenic acid 2 and  
 AgNO3 1 mol) 1.44 g, and MeOH 20 mL, dried, overcoated with a soln.  
 consisting of m-dimethylaminophenol 137, NH4Br 2.5, NH4I 0.2 mg, and MeOH  
 5 mL, dried, overcoated with a soln. consisting of a 4% gelatin soln. 100,  
 a 1% Na laurylsulfonate 1, and a HCHO-NaHSO3 adduct 0.001 g, dried,  
 exposed to a fluorescence lamp (60 W) at a distance of 1 m for 2 s, heated  
 at 85-90.degree. for 30 s, and washed by MeOH to obtain a strong  
**polymer** film in the exposed area.  
 ST photothermog film silver salt monomer; **reductant** monomer silver  
 salt photothermog  
 IT Photothermography  
 (heat-developable photosensitive compns. contg. photosensitive silver  
 salt and **reducing** agent and **polymerizable** monomer  
 for)  
 IT Photoimaging compositions and processes  
 (photopolymerizable, heat-developable, contg. photosensitive silver  
 salt and **reducing** agent and **polymerizable** compd.)  
 IT 99-07-0 120-80-9, uses and miscellaneous 2475-44-7 **4657-12-9**  
 6342-17-2 13489-81-1 22091-92-5 25820-85-3  
 RL: USES (Uses)  
 (heat-developable photosensitive compns. contg. photosensitive silver  
 salt and **polymerizable** compd. and, for photothermog. and  
 photoimaging process)  
 IT 92-43-3 110-26-9 870-72-4 1552-42-7 2274-13-7 28805-80-3  
 36886-76-7 51178-86-0 102840-31-3  
 RL: USES (Uses)  
 (heat-developable photosensitive compns. contg. photosensitive silver  
 salt and **reducing** agent and **polymerizable** monomer  
 and, for photothermog. and photoimaging process)  
 IT 79-06-1, uses and miscellaneous 109-17-1 4986-89-4  
 RL: USES (Uses)  
 (heat-developable photosensitive compns. contg. photosensitive silver  
 salt and **reducing** agent and, for photothermog. and  
 photoimaging process)  
 IT 2489-05-6 22257-44-9  
 RL: USES (Uses)  
 (heat-developable photosensitive compns. contg. **reducing**  
 agent and **polymerizable** monomer and, for photothermog. and  
 photoimaging compns.)  
 IT **4657-12-9**  
 RL: USES (Uses)  
 (heat-developable photosensitive compns. contg. photosensitive silver  
 salt and **polymerizable** compd. and, for photothermog. and  
 photoimaging process)  
 RN 4657-12-9 HCAPLUS  
 CN Benzenemethanesulfonic acid, .alpha.-hydroxy-, monosodium salt (9CI) (CA  
 INDEX NAME)



● Na

L15 ANSWER 11 OF 19 HCAPLUS COPYRIGHT 2000 ACS

AN 1985:157932 HCAPLUS

DN 102:157932

TI Silver halide photographic material

PA Konishiroku Photo Industry Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

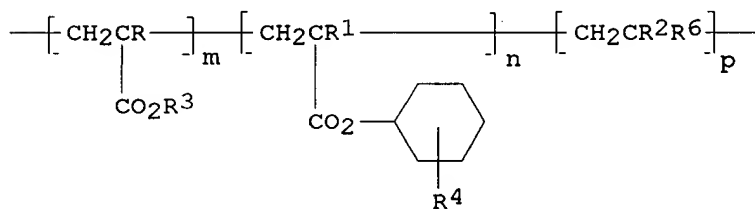
IC ICM G03C001-04

ICS C08L033-04

CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 59224839	A2	19841217	JP 1983-138752	19830729
GI					



I

AB Ag halide photog. photosensitive materials contain latexes of a **polymer** of the general formula I ( $m + n + p = 100$  wt.%; 10 .ltoreq. n .ltoreq. 70 wt.%, p .ltoreq. 15 wt.%;  $\text{R}, \text{R}^1, \text{R}^2 = \text{H}, \text{Me}, \text{Et}, \text{OH}, \text{HOCH}_2, \text{HOC}_2\text{H}_4, \text{HO}_2\text{CCH}_2, \text{HO}_2\text{CC}_2\text{H}_4$ ;  $\text{R}^3 = \text{C}_1\text{-4 alkyl}$ ;  $\text{R}^4 = \text{H}, \text{OH}, \text{halo}, \text{C}_1\text{-6 alkyl}$ ;  $\text{R}^5 = \text{H}, \text{monovalent group}$ ) in .gtoreq.1 of the hydrophilic colloid layers. The addn. of the latex not only improves the adhesion of the layer with support but also improves **redn.** characteristics of the photog. materials. Thus, acrylic acid-cyclohexyl acrylate-Et acrylate copolymer latex was added to a Ag(Br,I) emulsion. The photog. emulsion showed good stability, and photog. film prepd. by using the emulsion showed good adhesion to the layers and good **redn.** rate. The addn. of the latex did not degrade the photog. characteristics of the emulsion.

ST cyclohexyl acrylate copolymer photog; gelatin substitute photog

IT Photographic emulsions

(gelatin substitute, cyclohexyl acrylate deriv. copolymers as)

IT 61644-58-4 95972-30-8 95972-32-0 95972-33-1 95972-34-2

95972-35-3 95972-38-6 95972-39-7 95972-40-0

(silver halide photog. emulsion contg. latex of, for improved adhesion and **redn.** characteristics)

IT 95972-30-8

(silver halide photog. emulsion contg. latex of, for improved adhesion and **redn.** characteristics)

RN 95972-30-8 HCAPLUS

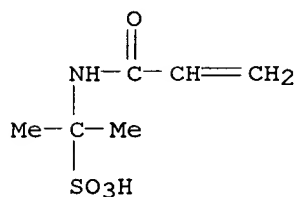
CN 2-Propenoic acid, ethyl ester, polymer with 4-methylcyclohexyl 2-propenoate and 2-[(1-oxo-2-propenyl)amino]-2-propanesulfonic acid monosodium salt (9CI) (CA INDEX NAME)



CM 1

CRN 63149-48-4

CMF C6 H11 N O4 S . Na

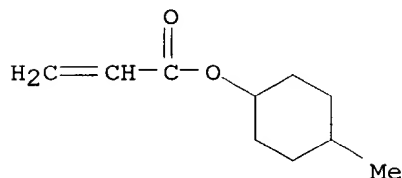


● Na

CM 2

CRN 16491-65-9

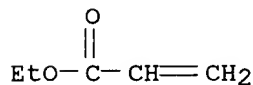
CMF C10 H16 O2



CM 3

CRN 140-88-5

CMF C5 H8 O2

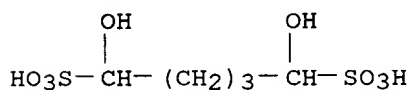


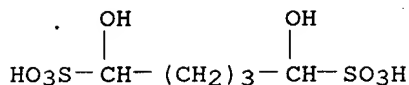
L15 ANSWER 12 OF 19 HCAPLUS COPYRIGHT 2000 ACS  
 AN 1985:106310 HCAPLUS  
 DN 102:106310  
 TI Nephrotoxicity inhibitors for aminoglycoside antibiotics  
 IN Williams, Patricia D.; Hottendorf, Girard H.  
 PA Bristol-Myers Co. , USA  
 SO Brit. UK Pat. Appl., 14 pp.  
 CODEN: BAXXDU  
 DT Patent  
 LA English  
 IC A61K037-00; A61K031-71; A61K035-74; A61K045-06  
 CC 1-5 (Pharmacology)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 2139087	A1	19841107	GB 1984-10804	19840427
	GB 2139087	B2	19870325		
	US 4526888	A	19850702	US 1983-489999	19830429

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NL 8401322	A	19841322	NL 1984-1322	19840425
ZA 8403075	A	19841224	ZA 1984-3075	19840425
JP 59206311	A2	19841122	JP 1984-83039	19840426
JP 05053776	B4	19930810		
BE 899542	A1	19841029	BE 1984-212851	19840427
SE 8402333	A	19841030	SE 1984-2333	19840427
SE 466288	B	19920127		
SE 466288	C	19920527		
AU 8427442	A1	19841101	AU 1984-27442	19840427
AU 560158	B2	19870402		
FR 2544986	A1	19841102	FR 1984-6741	19840427
FR 2544986	B1	19870619		
DE 3415805	A1	19850228	DE 1984-3415805	19840427
CH 660457	A	19870430	CH 1984-2088	19840427
CA 1227135	A1	19870922	CA 1984-452933	19840427
PRAI US 1983-489999		19830429		
AB	<b>Polymers</b> of asparagine, e.g. poly-L-asparagine (PAsp) [28088-48-4] and of aspartic acid, e.g. poly-L-aspartic acid (PAA) [25608-40-6] or their copolymer [95144-25-5] when administered cojointly with an aminoglycoside antibiotic, <b>reduced</b> the nephrotoxicity of the antibiotic apparently by inhibiting the renal uptake or binding of the aminoglycoside. Thus, the gentamicin-PAsp mixt. [95148-96-2] or the amikacin-PAA mixt. [95149-05-6] had decreased nephrotoxicity when compared to that obsd. in rats treated with gentamicin [1403-66-3] or amikacin [37517-28-5], resp.			
ST	aminoglycoside antibiotic nephrotoxicity transport inhibitor; amino acid <b>polymer</b> antibiotic nephrotoxicity			
IT	Ferritins (aminoglycoside antibiotic membrane transport response to, nephrotoxicity in relation to)			
IT	Kidney, toxic chemical and physical damage (aminoglycoside antibiotic toxicity to, amino acid <b>polymers</b> effect on)			
IT	Antibiotics (aminoglycoside, nephrotoxicity of, amino acid <b>polymers</b> effect on)			
IT	Polyamides, biological studies (poly(amino acids), nephrotoxicity of aminoglycoside antibiotics response to)			
IT	71-44-3 75-92-3 997-20-6 <b>7420-89-5</b> 21743-35-1 24937-47-1 24937-49-3 24991-23-9 25104-12-5 25104-18-1 25212-18-4 25513-46-6 25608-40-6 26062-48-6 26063-13-8 26854-81-9 26894-34-8 28088-48-4 36787-86-7 38000-06-5 (aminoglycoside antibiotic membrane transport response to, nephrotoxicity in relation to)			
IT	95148-96-2 95148-97-3 95148-98-4 95148-99-5 95149-00-1 95149-01-2 95149-02-3 95149-03-4 95149-04-5 95149-05-6 (nephrotoxicity of)			
IT	95144-25-5 (nephrotoxicity of aminoglycoside antibiotics in relation to)			
IT	1403-66-3 37517-28-5 (nephrotoxicity of, amino acid <b>polymers</b> effect on)			
IT	<b>7420-89-5</b> (aminoglycoside antibiotic membrane transport response to, nephrotoxicity in relation to)			
RN	7420-89-5 HCAPLUS			
CN	1,5-Pentanedisulfonic acid, 1,5-dihydroxy-, disodium salt (7CI, 8CI, 9CI) (CA INDEX NAME)			





●2 Na

L15 ANSWER 13 OF 19 HCAPLUS COPYRIGHT 2000 ACS

AN 1983:54705 HCAPLUS

DN 98:54705

TI Ketone bisulfites as **reducing** agent for free radical  
**polymerization**

IN Pinschmidt, Robert K., Jr.; Marten, Finn L.

PA Air Products and Chemicals, Inc., USA

SO U.S., 6 pp.

CODEN: USXXAM

DT Patent

LA English

IC C08L023-02

NCL 524819000

CC 35-5 (Chemistry of Synthetic High Polymers)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4360632	A	19821123	US 1981-314318	19811023
	FR 2515189	A1	19830429	FR 1982-17716	19821022
	FR 2515189	B1	19860829		
	JP 58080302	A2	19830514	JP 1982-184789	19821022
	JP 61054321	B4	19861121		
	GB 2108980	A1	19830525	GB 1982-30207	19821022
	GB 2108980	B2	19850501		
	DE 3239212	A1	19830526	DE 1982-3239212	19821022
	DE 3239212	C2	19840301		

PRAI US 1981-314318 19811023

AB Latexes are prepd. by **polymg.** vinyl compds. in the presence of stabilizers, oxidants, and H<sub>2</sub>O-sol. bisulfite adducts of C<sub>3</sub>-8 ketones as **reducing** agents. Thus, adding 1854 g acrylic acid in 2.78 kg H<sub>2</sub>O over 2 h, 154 g 70% tert-BuOOH in 3.45 kg H<sub>2</sub>O at 3.7 mL/min, and Me<sub>2</sub>C(OH)SO<sub>3</sub>Na (I) [540-92-1] (from 158 g acetone) in 6045 g H<sub>2</sub>O at 1350 mL/h to vinyl acetate 21,600, nonylphenol ethoxylate phosphate 810, FeSO<sub>4</sub>·7H<sub>2</sub>O 2, and H<sub>2</sub>O 19,000 g stirred at pH 4.2 and 46-50.degree. with I (from 5.5 g acetone) and C<sub>2</sub>H<sub>4</sub> at 500 psi for 4 h gave a copolymer [26713-18-8] (glass temp. -7.degree.) latex contg. 3.4 ppm free HCHO, compared with 78 ppm with (HOCH<sub>2</sub>SO<sub>2</sub>)<sub>2</sub>Zn in place of I.

ST catalyst **polymn** redox; bisulfite ketone catalyst **polymn**  
; acetone bisulfite catalyst **polymn**; sulfonate hydroxyalkane  
catalyst **polymn**; vinyl acetate **polymn** redox; ethylene  
**polymn** redox catalyst

IT Ketones, compounds

(bisulfites, catalysts, for emulsion **polymn.**)IT **Polymerization** catalysts(redox, ketone bisulfite-oxidants, for emulsion **polymn.**)

IT 540-92-1 13489-81-1 30723-93-4 84371-02-8

84371-03-9 84371-04-0

RL: CAT (Catalyst use); USES (Uses)

(catalysts, for emulsion **polymn.**)

IT 24937-78-8P 26713-18-8P

(emulsions, manuf. of, catalysts for)

IT 540-92-1 30723-93-4 84371-02-8

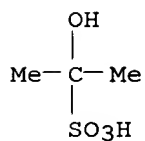
84371-03-9 84371-04-0

RL: CAT (Catalyst use); USES (Uses)

(catalysts, for emulsion **polymn.**)

RN 540-92-1 HCAPLUS

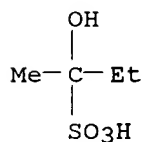
CN 2-Propanesulfonic acid, 2-hydroxy-, monosodium salt. (8CI, 9CI) (CA INDEX



● Na

RN 30723-93-4 HCAPLUS

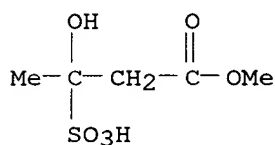
CN 2-Butanesulfonic acid, 2-hydroxy-, monosodium salt (8CI, 9CI) (CA INDEX NAME)



● Na

RN 84371-02-8 HCAPLUS

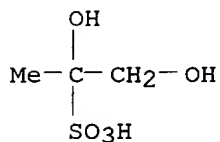
CN Butanoic acid, 3-hydroxy-3-sulfo-, 1-methyl ester, monosodium salt (9CI) (CA INDEX NAME)



● Na

RN 84371-03-9 HCAPLUS

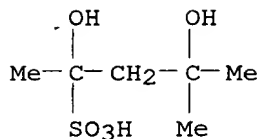
CN 2-Propanesulfonic acid, 1,2-dihydroxy-, monosodium salt (9CI) (CA INDEX NAME)



● Na

RN 84371-04-0 HCAPLUS

CN 2-Pentanesulfonic acid, 2,4-dihydroxy-4-methyl-, monosodium salt (9CI) (CA INDEX NAME)

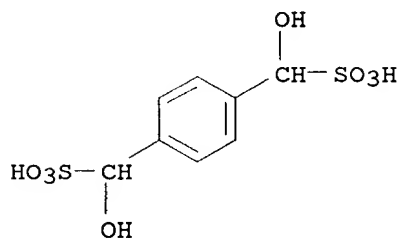


● Na

L15 ANSWER 14 OF 19 HCAPLUS COPYRIGHT 2000 ACS  
 AN 1982:69528 HCAPLUS  
 DN 96:69528  
 TI Basic studies on the synthesis of nonflammable and electroconductive macromolecules  
 AU Lee, Woo Young; Chang, Sae Hee  
 CS Coll. Nat. Sci., Seoul Natl. Univ., Seoul, S. Korea  
 SO Chayon Kwahak Taehak Nomunjip (Soul Taehakkyo) (1980), 5(1), 57-67  
 CODEN: CKTNDR  
 DT Journal  
 LA English  
 CC 35-5 (Chemistry of Synthetic High Polymers)  
 AB **Polymers** with high N content, e.g. polyhydrazones and polyhydrazides, were synthesized by condensing hydrazine, phenylenedihydrazines, or dihydrazides with dialdehydes, diketones, diacyl chlorides, or acid anhydrides. The products were characterized by IR spectra and elemental anal.  
 ST nitrogen contg nonflammable **polymer**; electrocond nitrogen contg **polymer**; polyhydrazone synthesis; polyhydrazide synthesis; hydrazine dicarbonyl compd polycondensation; dihydrazide dicarbonyl compd polycondensation; phenylenedihydrazine dicarbonyl compd polycondensation; dicarbonyl compd hydrazine polycondensation  
 IT Hydrazones  
 RL: SPN (Synthetic preparation); PREP (Preparation) (polymeric, prepn. of)  
 IT Polyhydrazides  
 RL: SPN (Synthetic preparation); PREP (Preparation) (arom., prepn. of)  
 IT **Polymerization**  
 (condensation, of hydrazine derivs. with dicarbonyl compds.)  
 IT Aldehydes, **polymers**  
 (di-, **polymers** with phenylenedihydrazine)  
 IT 79702-21-9P 79715-90-5P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation) (prepn. and hydrolysis of)  
 IT 27044-31-1P 29695-95-2P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation) (prepn. and thermal cyclization of)  
 IT 16906-23-3P 79702-16-2P 79702-17-3P 79702-18-4P 79702-19-5P  
 79702-20-8P 79715-82-5P 79715-83-6P 79715-84-7P 79715-85-8P  
 79715-86-9P **79715-89-2P** 79715-91-6P  
 RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. of)  
 IT 106-50-3, reactions  
 RL: RCT (Reactant)  
 (redn. of tetrazotized, by stannous chloride)  
 IT **79715-89-2P**  
 RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. of)  
 RN 79715-89-2 HCAPLUS  
 CN 1,4-Benzenedimethanesulfonic acid, .alpha.,.alpha.'-dihydroxy-, disodium salt, polymer with 1,1'-(1,4-phenylene)bis[hydrazine] dihydrochloride (9CI) (CA INDEX NAME)

CM 1

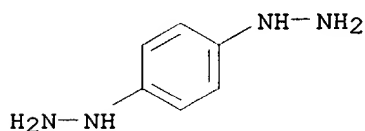
CRN 30133-29-0  
CMF C8 H10 O8 S2 . 2 Na



● 2 Na

CM 2

CRN 16906-23-3  
CMF C6 H10 N4 . 2 Cl H



● 2 HCl

L15 ANSWER 15 OF 19 HCAPLUS COPYRIGHT 2000 ACS

AN 1980:50073 HCAPLUS

DN 92:50073

TI Adhesive coatings for film supports

IN Nagasawa, Kotaro; Sato, Tsutomu

PA Somar Mfg. Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC C08J007-04; C09J005-02

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic Processes)

Section cross-reference(s): 42

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 54094575	A2	19790726	JP 1978-1238	19780110
	JP 60059254	B4	19851224		

AB Film supports are coated with a vinylidene chloride (co)polymer-based adhesive compn. contg. RSO3H (R= aryl, alkyl, cycloalkyl, aralkyl, or heterocyclic moiety; R may be substituted with SO3H-group contg. substituent). The film supports are useful for diazo copying materials, photosensitive resin films, photog. films, as well as laminated wrapping sheets. The use of the sulfonic acid derivs. **reduces** the corrosion of various app. during coating or combustion of waste films. Thus, a poly(ethylene terephthalate) film was coated with a compn. contg. acrylonitrile-vinylidene chloride (1:9.76 mol ratio) copolymer 2.0, p-phenolsulfonic acid 0.25, MeCOEt 48.5, xylene 28.0, and cellosolve 41.5

parts to give a film support was then coated with a diazo photosensitive compn. to give a diazo photog. film. Good adhesion with the support was attained.

ST film support adhesive coating; diazo copying film support

IT Diazo process

Printing plates  
(photosensitive sheets for, adhesive coatings for film supports for)

IT Photographic films  
(supports, adhesive compn. contg. vinylidene chloride **polymer** and sulfonic acid derivs. for)

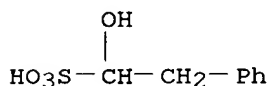
IT 98-67-9 120-18-3 585-42-2 1782-10-1 4681-78-1 9010-76-8  
53393-71-8 72452-31-4

RL: USES (Uses)  
(adhesive compn. contg., for photog. film supports)

IT 53393-71-8  
RL: USES (Uses)  
(adhesive compn. contg., for photog. film supports)

RN 53393-71-8 HCAPLUS

CN Benzeneethanesulfonic acid, .alpha.-hydroxy- (9CI) (CA INDEX NAME)



L15 ANSWER 16 OF 19 HCAPLUS COPYRIGHT 2000 ACS

AN 1976:111483 HCAPLUS

DN 84:111483

TI Reverse osmosis process using crosslinked aromatic polyamide membranes

IN McKinney, Ray, Jr.; Hofferbert, William L.

PA United States Dept. of the Interior, USA

SO U. S. Pat. Appl., 15 pp. Avail. NTIS.  
CODEN: XAXXAV

DT Patent

LA English

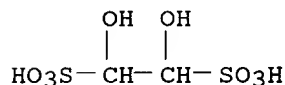
CC 61-5 (Water)

Section cross-reference(s): 37

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 616441		19670213	US 1967-616441	19670213
AB	Reverse osmosis membranes with improved flux stability are prepd. by crosslinking arom. polyamide membranes. The crosslinking is done by using reagents such as aldehydes, polyamines, polycarboxylic acids, polyisocyanates, oxidizing agents, etc. Suitable solvents of the <b>polymers</b> are DMF, dimethylacetamide, dimethylsulfoxide, tetramethylurea, etc. The casting soln. contains a salt, e.g. CaCl <sub>2</sub> or LiCl, to <b>reduce</b> the vapor pressure and improve the thermal stability, usually .apprx.25-45 wt.% of the <b>polymer</b> . The solvent evapn. should be at a rate just sufficient to form a uniform, continuous solvent-free zone at the air-soln. interface. Drying is generally at .apprx.50-150.degree. for .apprx.15-200 min. An effective linear polyamide results from the copolymerization of 1,3-bis(3-aminobenzamido)benzene, terephthaloyl chloride, and 3,5-diaminobenzoic acid. Crosslinking may also be achieved by exposing the coagulated and extracted membrane to radiation, e.g. .gamma. radiation at .apprx.8.75 .times. 10 <sup>5</sup> Rads/hr 0.5-12 hr.				
ST	reverse osmosis membrane <b>polymer</b> ; aminobenzamidobenzene <b>polymer</b> reverse osmosis; terephthaloyl chloride <b>polymer</b> reverse osmosis; aminobenzoic acid <b>polymer</b> reverse osmosis; polyamide resin membrane reverse osmosis				
IT	Polyamides, uses and miscellaneous				
RL:	USES (Uses) (membranes of improved flux stability from crosslinked, for water purifn. by reverse osmosis)				

IT Water purification **Best Available Copy**  
 (reverse osmosis, crosslinked polyamide membranes for)  
 IT 517-21-5 58640-09-8  
 RL: OCCU (Occurrence)  
 (crosslinking agents for polyamides, for reverse osmosis membranes of improved flux stability)  
 IT 51485-41-7  
 RL: OCCU (Occurrence)  
 (membrane, reverse osmosis purifn. of water by)  
 IT 25035-07-8 27026-87-5  
 RL: OCCU (Occurrence)  
 (membranes from crosslinked, reverse osmosis purifn. of water by)  
 IT 29889-65-4  
 RL: OCCU (Occurrence)  
 (membranes from formaldehyde crosslinked, reverse osmosis purifn. of water by)  
 IT 517-21-5  
 RL: OCCU (Occurrence)  
 (crosslinking agents for polyamides, for reverse osmosis membranes of improved flux stability)  
 RN 517-21-5 HCAPLUS  
 CN 1,2-Ethanedisulfonic acid, 1,2-dihydroxy-, disodium salt (7CI, 8CI, 9CI)  
 (CA INDEX NAME)



● 2 Na

L15 ANSWER 17 OF 19 HCAPLUS COPYRIGHT 2000 ACS  
 AN 1973:85768 HCAPLUS  
 DN 78:85768  
 TI Durable press wool fabric  
 AU Wasley, W. L.; Pittman, A. G.; Jones, C. C.; Fong, W.; Pardo, C. E.  
 CS West. Reg. Res. Lab., U. S. Dep. Agric., Berkeley, Calif., USA  
 SO Text. Chem. Color. (1973), 5(1), 25-8  
 CODEN: TCCOB6  
 DT Journal  
 LA English  
 CC 39-10 (Textiles)  
 AB A procedure for prepg. durable-press machine-washable wool fabrics involved treating the fabric with an emulsion contg. a glycidol-terminated polyurethane shrinkproofing **polymer**, a crosslinking agent, e.g. N-methylolacrylamide [924-42-5], and a **reducing** agent, i.e. a bisulfite, and drying the fabric without curing the **polymer**. The fabric was made into a garment which was sprayed to 40-50% pickup with a 4% aq. soln. of Ma glyoxal bisulfite [39003-51-5], steam pressed (30 sec steam, 20 sec bake, and 10 sec vacuum), and cured 10-15 min at 300-310.deg.F. The garments retained the desired creases and smoothness through >10 launderings and tumble dryings.  
 ST shrinkproofing wool fabric; durable press finishing wool; urethane **polymer** shrinkproofing wool; methylolacrylamide crosslinking agent wool; acrylamide deriv crosslinking wool  
 IT Textiles  
 (durable-press finishing and shrinkproofing of woollen, by urethane **polymers** and methylolacrylamide)  
 IT Creasing  
 (durable-press, of woollen textiles, with simultaneous shrinkproofing)  
 IT Creaseproofing  
 (of woollen textiles, with simultaneous shrinkproofing)  
 IT Rubber, urethane, uses and miscellaneous



(woolen textiles ~~Best Available Copy~~ glycidyl-terminated Helastic 10147LV, with simultaneous durable-press finishing)

IT 517-21-5

RL: CAT (Catalyst use); USES (Uses)

(catalyst, in durable-press finishing and shrinkproofing of woolen textiles)

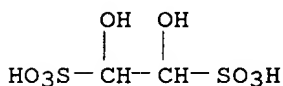
IT 517-21-5

RL: CAT (Catalyst use); USES (Uses)

(catalyst, in durable-press finishing and shrinkproofing of woolen textiles)

RN 517-21-5 HCAPLUS

CN 1,2-Ethanedisulfonic acid, 1,2-dihydroxy-, disodium salt (7CI, 8CI, 9CI)  
(CA INDEX NAME)



● 2 Na

L15 ANSWER 18 OF 19 HCAPLUS COPYRIGHT 2000 ACS

AN 1971:99647 HCAPLUS

DN 74:99647

TI Oximidomethanesulfonamides

IN Loev, Bernard

PA Smith Kline and French Laboratories

SO U.S., 4 pp. Continuation-in-part of U.S. 3,480,636

CODEN: USXXAM

DT Patent

LA English

IC C07C

NCL 260556000

CC 25 (Noncondensed Aromatic Compounds)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3549702	A	19701222	US 1967-672998	19671005

AB Continuation-in-part of U.S. 3,480,636 (CA 72: 42793c).

Oximido-methanesulfonamides R1C(:NOR2)SO2NR3R4 (I) are prepd. either by **redn.** of a nitromethanesulfonamide or oximation of a methanesulfonamide. The latter procedure is preferred. For example, N,N-dimethyl-.alpha.-toluenesulfonamide in dry THF was added to a slurry of KH in THF keeping the temp. below 40.degree.. The mixt. was stirred for 30 min at 30.degree., cooled to 10.degree. and Bu nitrite added. The mixt. was then stirred for 3.5 hr to give I (R1 = Ph, R2 = H, R3 = R4 = Me). I (R2 = H) was alkylated to I (R2 = alkyl, such as Me) which are useful as emulsifying agents, **plasticizers** and herbicides.

ST emulsifying agent; oximidomethanesulfonamide; methanesulfonamide oximido; hydroxyimino methanesulfonamide; herbicidal methanesulfonamide;

**plasticizer**

IT 22184-76-5P 22184-78-7P 31161-96-3P 31161-97-4P **31161-98-5P**  
32685-00-0P 32831-62-2P

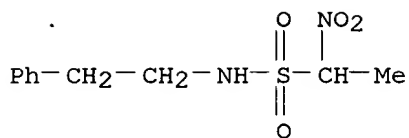
RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

IT **31161-98-5P**

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

RN 31161-98-5 HCAPLUS

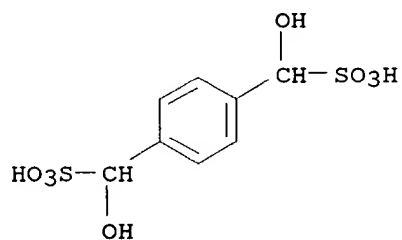
CN Ethanesulfonamide, 1-nitro-N-phenethyl- (8CI) (CA INDEX NAME)



- L15 ANSWER 19 OF 19 HCAPLUS COPYRIGHT 2000 ACS  
 AN 1971:32038 HCAPLUS  
 DN 74:32038  
 TI **Polymers** containing anthraquinone units: polyimidazoles and polypyrrolones from 1,2,5,6-tetraaminoanthraquinone  
 AU Pense, Rolf; Marvel, Carl S.  
 CS Dep. Chem., Univ. Arizona, Tucson, Ariz., USA  
 SO J. Polym. Sci., Part A-1 (1970), 8(11), 3189-98  
 CODEN: JPLCAT  
 DT Journal  
 LA English  
 CC 35 (Synthetic High Polymers)  
 AB 1,2,5,6-Tetraaminoanthraquinone was condensed with isophthalaldehyde and terephthalaldehyde and their bisulfite addn. compds. to yield new heat-stable **polymers**. It has also been condensed with pyromellitic anhydride to give the pyrolone. The highest viscosities were obtained in **polymers** prepd. with acid catalysts. The **polymers** were nearly all sol. in concd. H<sub>2</sub>SO<sub>4</sub> but not in org. solvents. Those sol. in H<sub>2</sub>SO<sub>4</sub> could also be solubilized by **redn** . with Na<sub>2</sub>S<sub>2</sub>O<sub>4</sub> and KOH in aq. org. solns. A few **polymers** were apparently crosslinked, since they would not dissolve in either H<sub>2</sub>SO<sub>4</sub> or in base on **redn**. Weak fibers were obtained by spinning the **reduced** alk. solns. of the **polymers** into aq. acid.  
 ST aminoanthraquinones polyamides; polyamides aminoanthraquinones; anthraquinones polyamides; polyimidazoles; polypyrrolones; phthalamides **polymers**  
 IT Ring closure  
 (in **polymn.**, of aromatic dialdehydes with tetraaminoanthraquinone)  
 IT **Polymerization**  
 (ring closure and, of aromatic dialdehydes with tetraaminoanthraquinone)  
 IT Isoindolo[2,1-a]anthra[1,2-d:5,6-d']diimidazole, derivs., **polymers**  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)  
 IT Anthraquinone, 1,2,5,6-tetraamino-, **polymer** with disodium .alpha., .alpha.'-dihydroxy-m-xylene-.alpha., alpha.'-disulfonate  
 Anthraquinone, 1,2,5,6-tetraamino-, **polymer** with disodium .alpha., .alpha.'-dihydroxy-p-xylene-.alpha., alpha.'-disulfonate  
 Methanesulfonic acid, p-phenylenedi-, disodium salt, **polymer** with 1,2,5,6-tetraaminoanthraquinone  
 Methanesulfonic acid, m-phenylenebis[hydroxy-, disodium salt, **polymer** with 1,2,5,6-tetraaminoanthraquinone  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of, ring closure in)  
 IT 30133-18-7  
 RL: USES (Uses)  
 (model compd., for aromatic dialdehyde-tetraaminoanthraquinone **polymers**)  
 IT 30133-29-0P 30133-30-3P 31546-93-7P 31546-94-8P 31546-99-3P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)  
 IT 30110-06-6P 30110-10-2P 32506-80-2P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of, ring closure in)  
 IT 30133-29-0P 30133-30-3P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)

RN 30133-29-0 HCAPLUS **Best Available Copy**

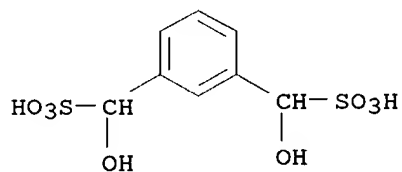
CN 1,4-Benzenedimethanesulfonic acid, .alpha.,.alpha.'-dihydroxy-, disodium salt (9CI) (CA INDEX NAME)



●2 Na

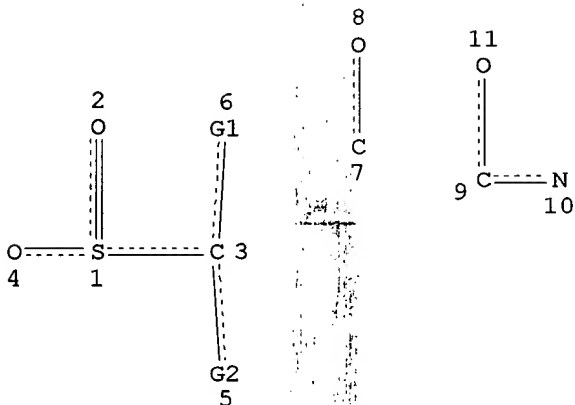
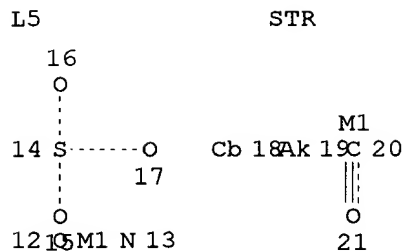
RN 30133-30-3 HCAPLUS

CN 1,3-Benzenedimethanesulfonic acid, .alpha.,.alpha.'-dihydroxy-, disodium salt (9CI) (CA INDEX NAME)



●2 Na

Hardee 09/319,108



VAR G1=12/13

VAR G2=14/18/19/20/7/9

## NODE ATTRIBUTES:

HCOUNT	IS	M1	AT	12
HCOUNT	IS	M1	AT	20
NSPEC	IS	C	AT	1
NSPEC	IS	C	AT	2
NSPEC	IS	C	AT	3
NSPEC	IS	C	AT	4
NSPEC	IS	C	AT	5
NSPEC	IS	C	AT	6
NSPEC	IS	C	AT	7
NSPEC	IS	C	AT	8
NSPEC	IS	C	AT	9
NSPEC	IS	C	AT	10
NSPEC	IS	C	AT	11

DEFAULT MLEVEL IS ATOM

MLEVEL	IS	CLASS	AT	1	2	3	4	7	8	9	10	11	12	13	14	15	16	17	18	19

DEFAULT ECLEVEL IS LIMITED

## GRAPH ATTRIBUTES:

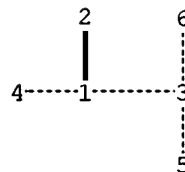
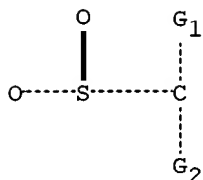
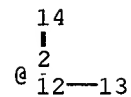
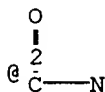
RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 21

## STEREO ATTRIBUTES: NONE

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L8	977	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L7
L9	73568	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(INDUSTRIAL ORGANIC CHEMICALS, LEATHER, FATS, AND WAXES)/SC,SX
L10	5	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L8 AND L9
L13	187	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	REDUC? AND L8
L14	20	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(POLYMER? OR PLASTIC?) AND L13
L15	19	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L14 NOT L10

L16 24 SEA FILE=HCAPLUS ABB=ON PLU=ON L13 AND (TEXTILE OR PRINT? OR  
BLEACH? OR DYE?)  
L17 20 SEA FILE=HCAPLUS ABB=ON PLU=ON L16 NOT (L15 OR L10)



chain nodes :

1 2 3 4 5 6 10 11 12 13 14

chain bonds :

1-2 1-3 1-4 3-5 3-6 10-11 12-13 12-14

exact/norm bonds :

1-3 1-4 3-5 3-6 10-11 12-13 12-14

exact bonds :

1-2

G1:OH,N

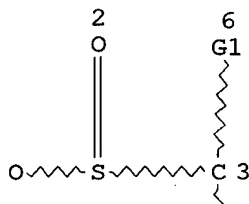
G2:SO3H,Cb,Ak,CHO,[\*1],[\*2]

Connectivity :

1:3EC

Match level :

1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 10:CLASS  
11:CLASS 12:CLASS 13:CLASS 14:CLASS

8  
O  
1  
1  
1  
1  
1  
1  
C  
7
$$\begin{array}{c} 11 \\ \text{O} \\ \parallel \\ {}^9\text{C} \text{---} \text{N} \end{array}$$


4 1



NODE ATTRIBUTES:

[illegible]

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES: **Best Available Copy**  
RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 21

STEREO ATTRIBUTES: NONE

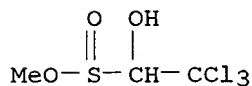
L13 9 SEA FILE=REGISTRY SSS FUL L11  
L14 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L13



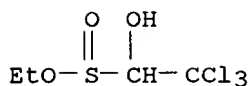
Hardee 09/319,108

L14 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2000 ACS  
 AN 1989:573609 HCAPLUS  
 DN 111:173609  
 TI Method of producing esters of 2,2,2-trichloro-1-hydroxyethylsulfonic acid  
 IN Baires, S. V.; Vil'danova, L. T.; Ivanov, V. B.; Ivanov, B. E.  
 PA Arbuzov, A. E., Institute of Organic and Physical Chemistry, USSR  
 SO U.S.S.R.  
 From: Otkrytiya, Izobret. 1989, (18), 94.  
 CODEN: URXXAF  
 DT Patent  
 LA Russian  
 IC ICM C07C145-00  
 ICA A01N041-04  
 CC 23-12 (Aliphatic Compounds)  
 FAN.CNT 1

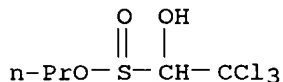
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	SU 1479453	A1	19890515	SU 1986-4091985	19860709
AB	The title esters CCl <sub>3</sub> CH(OH)S(O)OR (R = Me, Et, Pr, Bu, propargyl, allyl, acetylisopropenyl) are prep'd. by reaction of an equimolar mixt. of chloral and SCl <sub>2</sub> with 1-2 mol ROH at -25 to -10.degree. in an inert gas atm. For R = allyl or propargyl, the process is carried out in CH <sub>2</sub> Cl <sub>2</sub> .				
ST	chlorohydroxyethylsulfinate; sulfinate trichlorohydroxyethyl; ethylsulfinate trichlorohydroxy				
IT	123067-04-9P 123067-05-0P 123067-06-1P 123067-07-2P 123067-08-3P 123067-09-4P 123067-10-7P				
	RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. of, from chloral, sulfur dichloride, and alc.)				
IT	10545-99-0, Sulfur dichloride				
	RL: RCT (Reactant) (reaction of, with chloral and alcs., trichlorohydroxyethylsulfates from)				
IT	64-17-5, Ethanol, reactions 67-56-1, Methanol, reactions 71-23-8, Propanol, reactions 71-36-3, Butanol, reactions 107-18-6, Allyl alcohol, reactions 107-19-7, Propargyl alcohol 1522-20-9				
	RL: RCT (Reactant) (reaction of, with chloral and sulfur dichloride, trichlorohydroxyethylsulfate from)				
IT	75-87-6, Chloral				
	RL: RCT (Reactant) (reaction of, with sulfur dichloride and alcs., trichlorohydroxyethylsulfates from)				
IT	123067-04-9P 123067-05-0P 123067-06-1P 123067-07-2P 123067-08-3P 123067-09-4P 123067-10-7P				
	RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. of, from chloral, sulfur dichloride, and alc.)				
RN	123067-04-9 HCAPLUS				
CN	Ethanesulfonic acid, 2,2,2-trichloro-1-hydroxy-, methyl ester (9CI) (CA INDEX NAME)				



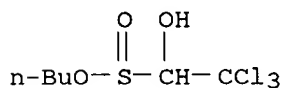
RN 123067-05-0 HCAPLUS  
 CN Ethanesulfonic acid, 2,2,2-trichloro-1-hydroxy-, ethyl ester (9CI) (CA INDEX NAME)



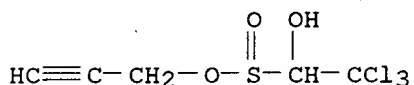
RN 123067-06-1 HCAPLUS  
 CN Ethanesulfinic acid, 2,2,2-trichloro-1-hydroxy-, propyl ester (9CI) (CA INDEX NAME)



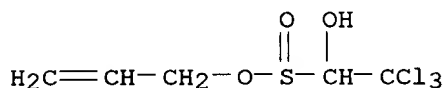
RN 123067-07-2 HCAPLUS  
 CN Ethanesulfinic acid, 2,2,2-trichloro-1-hydroxy-, butyl ester (9CI) (CA INDEX NAME)



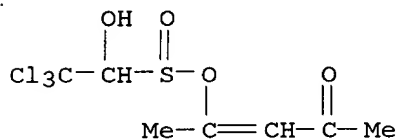
RN 123067-08-3 HCAPLUS  
 CN Ethanesulfinic acid, 2,2,2-trichloro-1-hydroxy-, 2-propynyl ester (9CI) (CA INDEX NAME)



RN 123067-09-4 HCAPLUS  
 CN Ethanesulfinic acid, 2,2,2-trichloro-1-hydroxy-, 2-propenyl ester (9CI) (CA INDEX NAME)

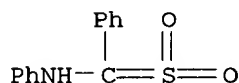


RN 123067-10-7 HCAPLUS  
 CN Ethanesulfinic acid, 2,2,2-trichloro-1-hydroxy-, 1-methyl-3-oxo-1-butenyl ester (9CI) (CA INDEX NAME)

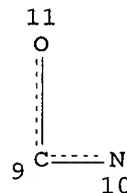
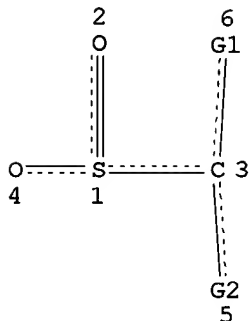
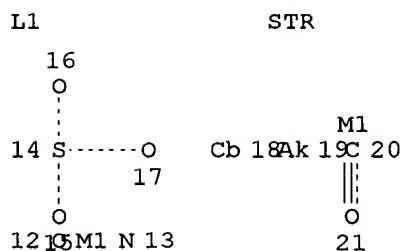


L14 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2000 ACS  
 AN 1975:427265 HCAPLUS  
 DN 83:27265  
 TI Oxidation products of carbothioamides. XXXII. Thiobenzanilide S,S-dioxide as reactive aminosulfene intermediate in the oxidative imidate formation from thiobenzanilide S-oxide in the presence of alcohols  
 AU Walter, Wolfgang; Bauer, Otto H.

CS Inst. Org. Chem. Biochem. Hamburg, Hamburg, Ger.  
 SC Justus Liebig's Ann. Chem. (1975), (2), 305-10  
 CODEN: JLACBF  
 DT Journal  
 LA German  
 CC 22-5 (Physical Organic Chemistry)  
 AB Evidence for aminosulfene formation in the oxidn. of PhC(SO)NHPPh (e.g., with m-ClC<sub>6</sub>H<sub>4</sub>CO<sub>2</sub>OH) was obtained, consisting of the formation of imidates, PhC(OR):NPh (R = alkyl), in the presence of alcs. The formation of benzanilide in the absence of nucleophiles indicates another reaction path competing with imide formation and predominating in the case of sterically hindered alcs. At higher pH values product analysis indicates a different mechanism.  
 ST oxidn thiobenzanilide oxide mechanism; sulfene intermediate oxidn thiobenzanilide oxide; imide formation oxidn thiobenzanilide oxide; benzanilide thio oxide oxidn  
 IT Substitution reaction  
     (of sulfur, in thiobenzanilide oxide)  
 IT Oxidation  
     (of thiobenzanilide oxide, mechanism of)  
 IT **56043-47-1**  
     RL: PRP (Properties)  
         (intermediate, in oxidn. of thiobenzanilide S-oxide)  
 IT 6244-77-5  
     RL: RCT (Reactant)  
         (oxidn. of)  
 IT 18263-20-2  
     RL: RCT (Reactant)  
         (oxidn. of, mechanism of)  
 IT 6421-04-1P 38921-49-2P 56043-46-0P  
     RL: SPN (Synthetic preparation); PREP (Preparation)  
         (prepn. of)  
 IT 6780-39-8  
     RL: PRP (Properties)  
         (trapping of, in oxidn. of thiobenzanilide oxide)  
 IT **56043-47-1**  
     RL: PRP (Properties)  
         (intermediate, in oxidn. of thiobenzanilide S-oxide)  
 RN 56043-47-1 HCAPLUS  
 CN Benzenecarbothioamide, N-phenyl-, S,S-dioxide (9CI) (CA INDEX NAME)



Hardee 09/319,108



VAR G1=12/13

VAR G2=14/18/19/20/7/9

## NODE ATTRIBUTES:

HCOUNT	IS	M1	AT	12
HCOUNT	IS	M1	AT	20
NSPEC	IS	C	AT	1
NSPEC	IS	C	AT	2
NSPEC	IS	C	AT	3
NSPEC	IS	C	AT	4
NSPEC	IS	C	AT	5
NSPEC	IS	C	AT	6
NSPEC	IS	C	AT	7
NSPEC	IS	C	AT	8
NSPEC	IS	C	AT	9
NSPEC	IS	C	AT	10
NSPEC	IS	C	AT	11

DEFAULT MLEVEL IS ATOM

MLEVEL	IS	CLASS	AT	1	2	3	4	7	8	9	10	11	12	13	14	15	16	17	18	19
				20	21															

DEFAULT ECLEVEL IS LIMITED

## GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 21

## STEREO ATTRIBUTES: NONE

L2	(	1916)	SEA	FILE=REGISTRY	SSS	FUL	L1
L3	(	977)	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L2
L4	(	73568)	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(INDUSTRIAL ORGANIC CHEMICALS, LEATHER, FATS, AND WAXES)/SC,SX
L5	(	5)	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L3 AND L4
L6	(	187)	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	REDUC? AND L3
L7	(	20)	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(POLYMER? OR PLASTIC?) AND L6
L8	(	19)	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L7 NOT L5
L9	(	24)	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L6 AND (TEXTILE OR PRINT? OR

L19

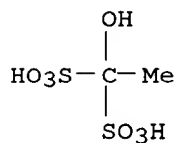
BLEACH? ~~CONFIDENTIAL~~ **Best Available Copy**  
20 SEA FILE=HCAPLUS ABB=ON PLU=ON L9 NOT (L8 OR L5)

NOT

Hardee 09/319,108

L10 ANSWER 1 OF 20 HCAPLUS COPYRIGHT 2000 ACS  
 AN 1999:421327 HCAPLUS  
 DN 131:75290  
 TI Liquid **bleach** compositions  
 IN Yamazaki, Yasuhiro; Miyasaki, Yoshitaka; Nishioka, Junko  
 PA Lion Corp., Japan  
 SO Jpn. Kokai Tokkyo Koho, 5 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM C11D007-54  
 ICS C11D010-02; C11D007-18; C11D001-04; C11D007-26  
 CC 46-5 (Surface Active Agents and Detergents)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11181491	A2	19990706	JP 1997-366486	19971224
AB	Liq <b>bleach</b> compns., with high <b>bleaching</b> power and <b>reduced</b> peroxide decompn. when pH is relatively high, comprise hydrogen peroxide 0.1-30 wt.%, alkali earth metal salts 0.001-1 wt.%, and phenol and its derivs. 0.01-10 wt.%. One such <b>bleach</b> compn. comprised hydrogen peroxide 5, calcium chloride 0.05, 4-methoxyphenol 0.1, a secondary alc. ethoxylate 2, 1-hydroxyethane-1,1-disulfonic acid 1 wt.% and had pH 7. The gas generated by the decompn. of hydrogen peroxide after storing for 14 days at 50.degree. was 4 mL.				
ST	hydrogen peroxide <b>bleach</b> liq; calcium chloride liq <b>bleach</b> ; methoxyphenol liq <b>bleach</b> ; hydroxyethane disulfonic acid liq <b>bleach</b>				
IT	<b>Bleaching</b> agents (liq. <b>bleach</b> compns.)				
IT	108-95-2, Phenol, uses	123-31-9, Hydroquinone, uses	150-76-5, 4-Methoxyphenol	7786-30-3, Magnesium chloride, uses	10043-52-4, Calcium chloride, uses <b>85985-29-1</b>
	RL: MOA (Modifier or additive use); USES (Uses) (liq. <b>bleach</b> compns.)				
IT	7722-84-1, Hydrogen peroxide, uses	RL: TEM (Technical or engineered material use); USES (Uses) (liq. <b>bleach</b> compns.)			
IT	<b>85985-29-1</b>	RL: MOA (Modifier or additive use); USES (Uses) (liq. <b>bleach</b> compns.)			
RN	<b>85985-29-1</b> HCAPLUS				
CN	1,1-Ethanedisulfonic acid, 1-hydroxy- (9CI) (CA INDEX NAME)				

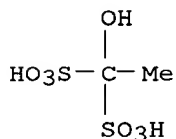


L10 ANSWER 2 OF 20 HCAPLUS COPYRIGHT 2000 ACS  
 AN 1999:421326 HCAPLUS  
 DN 131:75289  
 TI Liquid **bleaching** compositions for clothing  
 IN Yamazaki, Tomohiro; Miyamae, Yoshitaka; Nishioka, Junko  
 PA Lion Corp., Japan  
 SO Jpn. Kokai Tokkyo Koho, 5 pp.  
 CODEN: JKXXAF

DT Patent  
 LA Japanese  
 IC ICM C11D007-54  
 ICS C11D003-395; D06L003-02  
 CC 46-5 (Surface Active Agents and Detergents)  
 FAN.CNT 1

Best Available Copy

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11181490	A2	19990706	JP 1997-364688	19971218
AB	Title <b>bleaching</b> compns. comprise (1) hydrogen peroxide 0.1-30 wt.%, calcium salts (calcium chloride) 0.001-1 wt.%, and metal chelating agents (1-hydroxyethane-1,1-disulfonic acid) >0.1 wt.% and have pH in the range of 2-8. The compns. show <b>reduced</b> decompn. of hydrogen peroxide.				
ST	hydrogen peroxide <b>bleach</b> liq; calcium chloride liq hydrogen peroxide <b>bleach</b> ; hydroxyethane disulfonic acid liq <b>bleach</b>				
IT	<b>Bleaching</b> agents (liq. <b>bleaching</b> compns. for clothing)				
IT	10043-52-4, Calcium chloride, uses <b>85985-29-1</b> RL: MOA (Modifier or additive use); USES (Uses) (liq. <b>bleaching</b> compns. for clothing)				
IT	7722-84-1, Hydrogen peroxide, uses RL: TEM (Technical or engineered material use); USES (Uses) (liq. <b>bleaching</b> compns. for clothing)				
IT	<b>85985-29-1</b> RL: MOA (Modifier or additive use); USES (Uses) (liq. <b>bleaching</b> compns. for clothing)				
RN	85985-29-1 HCAPLUS				
CN	1,1-Ethanedisulfonic acid, 1-hydroxy- (9CI) (CA INDEX NAME)				



L10 ANSWER 3 OF 20 HCAPLUS COPYRIGHT 2000 ACS  
 AN 1997:465959 HCAPLUS  
 DN 127:163102  
 TI Kinetics of the **reduction** of binaphthylhexacarboxylic acid N,N'-diimide derivatives by sodium hydroxyalkanesulfinates. 2. Modeling of the kinetics of the **reductive** cyclization of kubogens in a nonsteady-state regime  
 AU Polenov, Yu. V.; Kublashvili, G. D.; Labutin, A. N.; Budanov, V. V.  
 CS Ivanov. Gos. Khim.-Tekhnol. Akad., Ivanovo, Russia  
 SO Izv. Vyssh. Uchebn. Zaved., Khim. Khim. Tekhnol. (1997), 40(1), 52-55  
 CODEN: IVUKAR; ISSN: 0579-2991  
 PB Ivanovskaya Gosudarstvennaya Khimiko-Tekhnologicheskaya Akademiya  
 DT Journal  
 LA Russian  
 CC 41-9 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)  
 AB Math. modeling is carried out to select a mechanism best fitting the exptl. kinetics of **redn.** of kubogens. The formation of perylenetetracarboxydiimide di- and tetraanions occurs via two parallel routes. Rate consts. of sep. reaction steps were calcd.  
 ST vat **dye** precursor **redn** hydroxyalkanesulfinate kinetics; kubogen **reductive** cyclization mechanism kinetics modeling; perylenetetracarboxydiimide anion vat **dye** prepn  
 IT Cyclization kinetics  
 (**reductive**; kinetics of the **redn.** of binaphthylhexacarboxylic acid N,N'-diimide derivs. by sodium hydroxyalkanesulfinates)

IT **Dyes** **Best Available Copy**  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
 (vat; kinetics of the **redn.** of binaphthylhexacarboxylic acid  
 N,N'-diimide derivs. by sodium hydroxyalkanesulfinates)

IT **Reduction** kinetics  
 (with cyclization; kinetics of the **redn.** of  
 binaphthylhexacarboxylic acid N,N'-diimide derivs. by sodium  
 hydroxyalkanesulfinates)

IT 78565-07-8, Kubogen Red 1-74  
 RL: PRP (Properties); RCT (Reactant); TEM (Technical or engineered  
 material use); USES (Uses)  
 (Kubogen Red 1-74; kinetics of the **redn.** of  
 binaphthylhexacarboxylic acid N,N'-diimide derivs. by sodium  
 hydroxyalkanesulfinates)

IT 193747-99-8  
 RL: PRP (Properties); RCT (Reactant); TEM (Technical or engineered  
 material use); USES (Uses)  
 (Kubogen Red 11-80F; kinetics of the **redn.** of  
 binaphthylhexacarboxylic acid N,N'-diimide derivs. by sodium  
 hydroxyalkanesulfinates)

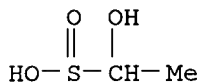
IT 78565-08-9  
 RL: PRP (Properties); RCT (Reactant); TEM (Technical or engineered  
 material use); USES (Uses)  
 (Kubogen Scarlet 5-75; kinetics of the **redn.** of  
 binaphthylhexacarboxylic acid N,N'-diimide derivs. by sodium  
 hydroxyalkanesulfinates)

IT 149-44-0, Sodium Hydroxymethylsulfinate **4378-67-0**, Sodium  
 1-Hydroxyethanesulfinate **131708-16-2**  
 RL: RCT (Reactant)  
 (kinetics of the **redn.** of binaphthylhexacarboxylic acid  
 N,N'-diimide derivs. by sodium hydroxyalkanesulfinates)

IT **4378-67-0**, Sodium 1-Hydroxyethanesulfinate **131708-16-2**  
 RL: RCT (Reactant)  
 (kinetics of the **redn.** of binaphthylhexacarboxylic acid  
 N,N'-diimide derivs. by sodium hydroxyalkanesulfinates)

RN 4378-67-0 HCAPLUS

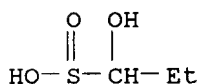
CN Ethanesulfinic acid, 1-hydroxy-, monosodium salt (8CI, 9CI) (CA INDEX  
 NAME)



● Na

RN 131708-16-2 HCAPLUS

CN 1-Propanesulfinic acid, 1-hydroxy-, monosodium salt (9CI) (CA INDEX NAME)



● Na

L10 ANSWER 4 OF 20 HCAPLUS COPYRIGHT 2000 ACS

AN 1997:465943 HCAPLUS

DN 127:163101

TI Kinetics of **reduction** of binaphthylhexacarboxylic acid



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N,N'-diimide derivat hydroxyalkanesulfinates. 1. Kinetics of **reduction** in quasi-steady-state approximation

AU Polenov, Yu. V.; Kublashvili, G. D.; Budanov, V. V.

CS Ivanov. Gos. Khim.-Tekhnol. Akad., Ivanovo, Russia

SO Izv. Vyssh. Uchebn. Zaved., Khim. Khim. Tekhnol. (1997), 40(1), 49-52  
CODEN: IVUKAR; ISSN: 0579-2991

PB Ivanovskaya Gosudarstvennaya Khimiko-Tekhnologicheskaya Akademiya

DT Journal

LA Russian

CC 41-9 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)

AB Kinetics of **reductive** cyclization of binaphthylhexacarboxylic acid N,N'-diimide derivs. (vat **dye** precursors) by sodium hydroxyalkanesulfinates has been studied and alternative step mechanisms have been discussed. All the possible mechanisms involve **redn.** agent splitting step.

ST binaphthylhexacarboxylic acid diimide deriv **reductive** cyclization; vat **dye** precursor sodium hydroxyalkanesulfinate **redn**; PERYLENETETRACARBOXYLIC anion prodn precursor **redn** kinetics; kubogen sodium hydroxyalkanesulfinate **redn** cyclization

IT Aldehydes, uses  
RL: NUU (Nonbiological use, unclassified); USES (Uses)  
(kinetics of **redn.** of binaphthylhexacarboxylic acid N,N'-diimide derivs. by sodium hydroxyalkanesulfinates in the presence of)

IT Cyclization kinetics  
(**reductive**; kinetics of **redn.** of binaphthylhexacarboxylic acid N,N'-diimide derivs. by sodium hydroxyalkanesulfinates in quasi-steady-state approxn.)

IT **Dyes**  
(vat, precursors; kinetics of **redn.** of binaphthylhexacarboxylic acid N,N'-diimide derivs. by sodium hydroxyalkanesulfinates in quasi-steady-state approxn.)

IT **Reduction** kinetics  
(with cyclization; kinetics of **redn.** of binaphthylhexacarboxylic acid N,N'-diimide derivs. by sodium hydroxyalkanesulfinates in quasi-steady-state approxn.)

IT 193747-99-8, Kubogen Red 11-80F  
RL: PRP (Properties); RCT (Reactant); TEM (Technical or engineered material use); USES (Uses)  
(Kubogen Red 11-80F; kinetics of **redn.** of binaphthylhexacarboxylic acid N,N'-diimide derivs. by sodium hydroxyalkanesulfinates in quasi-steady-state approxn.)

IT 149-44-0, Sodium hydroxymethanesulfinate **4378-67-0**, Sodium 1-hydroxyethanesulfinate **131708-16-2**  
RL: RCT (Reactant)  
(kinetics of **redn.** of binaphthylhexacarboxylic acid N,N'-diimide derivs. by sodium hydroxyalkanesulfinates in quasi-steady-state approxn.)

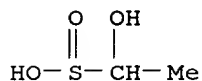
IT 150106-96-0P  
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(kinetics of **redn.** of binaphthylhexacarboxylic acid N,N'-diimide derivs. by sodium hydroxyalkanesulfinates in quasi-steady-state approxn.)

IT 50-00-0, Formaldehyde, uses 75-07-0, Acetaldehyde, uses  
RL: NUU (Nonbiological use, unclassified); USES (Uses)  
(kinetics of **redn.** of binaphthylhexacarboxylic acid N,N'-diimide derivs. by sodium hydroxyalkanesulfinates in the presence of)

IT **4378-67-0**, Sodium 1-hydroxyethanesulfinate **131708-16-2**  
RL: RCT (Reactant)  
(kinetics of **redn.** of binaphthylhexacarboxylic acid N,N'-diimide derivs. by sodium hydroxyalkanesulfinates in quasi-steady-state approxn.)

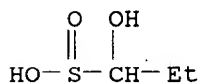
RN **4378-67-0** HCAPLUS

CN Ethanesulfinic acid, 1-hydroxy-, monosodium salt (8CI, 9CI) (CA INDEX



● Na

RN 131708-16-2 HCAPLUS  
 CN 1-Propanesulfinic acid, 1-hydroxy-, monosodium salt (9CI) (CA INDEX NAME)



● Na

L10 ANSWER 5 OF 20 HCAPLUS COPYRIGHT 2000 ACS  
 AN 1997:293723 HCAPLUS  
 DN 126:265343  
 TI Process for multistage **bleaching** kraft pulp  
 IN Nye, Jeffrey  
 PA Hoechst Celanese Corporation, USA  
 SO Can. Pat. Appl., 27 pp.  
 CODEN: CPXXEB  
 DT Patent  
 LA English  
 IC ICM D21C009-10  
 CC 43-6 (Cellulose, Lignin, Paper, and Other Wood Products)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CA 2181523	AA	19970121	CA 1996-2181523	19960718
	US 1690	H1	19971104	US 1995-504818	19950720

PRAI US 1995-504818 19950720

AB A method for **bleaching** lignocellulose contg. pulp which has been chem. pulped is described wherein the method comprises the steps of sequentially treating the pulp with a **reducing** agent, a chelating agent and an oxidative agent. Thus, a 3-stage **bleaching** sequence was carried out with Na hydrosulfite in a 1st stage, with DTPA in a 2nd stage and with H<sub>2</sub>O<sub>2</sub> in a 3rd stage.

ST multistage **bleaching** oxidant **reductant** pulp;  
 hydrosulfite **reductant** multistage **bleaching** pulp;  
 chelatan DTPA multistage **bleaching** pulp; hydrogen peroxide  
 multistage **bleaching** pulp; oxidative **reductive**  
 multistage **bleaching** pulp

IT **Reducing** agents  
 (**bleaching** agents; process for multistage **bleaching**  
 kraft pulp)

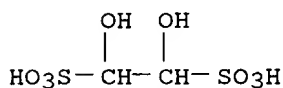
IT Inorganic peroxides  
 Peroxy acids

RL: NUU (Nonbiological use, unclassified); USES: (Uses)  
 (**bleaching** agents; process for multistage **bleaching**  
 kraft pulp)

IT Pulp **bleaching**  
 (multistage; process for multistage **bleaching** kraft pulp)

IT Carboxylic acids, uses  
 RL: NUU (Nonbiological use, unclassified); USES: (Uses)

(peroxy, **bleaching** Best Available Copy for multistage  
**bleaching** kraft pulp)  
IT Peroxysulfates  
RL: NUU (Nonbiological use, unclassified); USES (Uses)  
(peroxydisulfates, **bleaching** agents; process for multistage  
**bleaching** kraft pulp)  
IT Kraft pulp  
(process for multistage **bleaching** kraft pulp)  
IT Chelating agents  
RL: NUU (Nonbiological use, unclassified); USES (Uses)  
(process for multistage **bleaching** kraft pulp)  
IT 79-21-0, Peracetic acid 107-32-4, Performic acid **517-21-5**,  
Sodium glyoxal bisulfite 563-69-9, Carbonoperoxoic acid 870-72-4,  
Sodium formaldehyde bisulfite 1313-60-6, Sodium peroxide 1758-73-2,  
Formamidine sulfinic acid 7446-09-5, Sulfur dioxide, uses 7631-90-5,  
Sodium bisulfite 7681-52-9, Sodium hypochlorite 7722-84-1, Hydrogen  
peroxide, uses 7722-86-3, Peroxymonosulfuric acid 7775-14-6, Sodium  
hydrosulfite 7779-86-4, Zinc hydrosulfite 7782-50-5, Chlorine, uses  
7790-92-3, Hypochlorous acid 10049-04-4, Chlorine dioxide 16940-66-2,  
Sodium borohydride  
RL: NUU (Nonbiological use, unclassified); USES (Uses)  
(**bleaching** agents; process for multistage **bleaching**  
kraft pulp)  
IT 60-00-4, EDTA, uses 67-43-6 15827-60-8  
RL: NUU (Nonbiological use, unclassified); USES (Uses)  
(chelatatant; process for multistage **bleaching** kraft pulp)  
IT **517-21-5**, Sodium glyoxal bisulfite  
RL: NUU (Nonbiological use, unclassified); USES (Uses)  
(**bleaching** agents; process for multistage **bleaching**  
kraft pulp)  
RN 517-21-5 HCAPLUS  
CN 1,2-Ethanedisulfonic acid, 1,2-dihydroxy-, disodium salt (7CI, 8CI, 9CI)  
(CA INDEX NAME)



● 2 Na

L10 ANSWER 6 OF 20 HCAPLUS COPYRIGHT 2000 ACS  
AN 1995:879142 HCAPLUS  
DN 124:41275  
TI Processing of silver halide photographic materials using thiosulfonic acid  
to promote removal of impregnated solid dye dispersion  
IN Goto, Masatoshi; Fujita, Yoshihiro  
PA Fuji Photo Film Co Ltd, Japan  
SO Jpn. Kokai Tokkyo Koho, 51 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM G03C005-38  
ICS G03C001-83; G03C007-00; G03C007-42  
CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)  
FAN.CNT 1  
PATENT NO. KIND DATE APPLICATION NO. DATE  
PI JP 07181637 A2 19950721 JP 1993-345971 19931224  
US 5460923 A 19951024 US 1994-362929 19941223  
PRAI JP 1993-345971 19931224  
AB The claimed method is characterized by (1) that the material has .gtoreq.1

hydrophilic colloid **Best Available Copy** solid dye dispersion and (2) that it is treated by a soln. having fixing capability and contg. a thiosulfonic acid deriv. RSO<sub>2</sub>SM (R = aliph., arom., heterocyclic group; M = H, cation). The soln. preferably contains ammonium ion in the amt. of 0-50 mol% of total cationic species. The preferable solid **dye** is combined with a proton-releasing group. The thiosulfonate promotes fixing, **reduces** cyan stain, and also **reduces** the ammonium content in the fixing soln.

ST processing silver halide photog material; thiosulfonate fixing acceleration photog processing

IT Photographic processing

(processing of Ag halide photog. materials using thiosulfonic acid to promote removal of impregnated solid **dye** dispersion)

IT 117573-89-4 117573-98-5 162397-81-1 168974-33-2 171664-45-2

RL: DEV (Device component use); USES (Uses)

(**dye**; processing of Ag halide photog. materials using thiosulfonic acid to promote removal of impregnated solid **dye** dispersion)

IT 1950-85-2 23670-27-1 31999-88-9 42228-91-1 82341-95-5

**96425-01-3** 119871-23-7 160682-72-4 160682-74-6 171664-44-1

RL: TEM (Technical or engineered material use); USES (Uses)

(processing of Ag halide photog. materials using thiosulfonic acid to promote removal of impregnated solid **dye** dispersion)

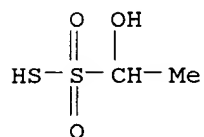
IT **96425-01-3**

RL: TEM (Technical or engineered material use); USES (Uses)

(processing of Ag halide photog. materials using thiosulfonic acid to promote removal of impregnated solid **dye** dispersion)

RN **96425-01-3** HCAPLUS

CN Ethanesulfonothioic acid, 1-hydroxy-, monopotassium salt (9CI) (CA INDEX NAME)



● K

L10 ANSWER 7 OF 20 HCAPLUS COPYRIGHT 2000 ACS

AN 1995:735281 HCAPLUS

DN 123:127431

TI Photographic element having **reduced** color contamination.

IN Singer, Stephen Paul; Darlak, Robert Stanley; Ling, Hans Gway; Platt, Norma B.

PA Eastman Kodak Co., USA

SO Eur. Pat. Appl., 28 pp.

CODEN: EPXXDW

DT Patent

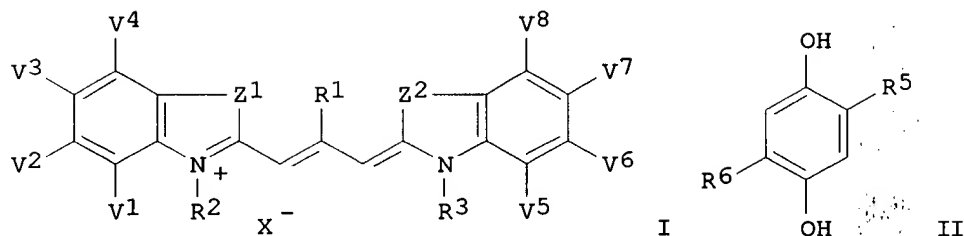
LA English

IC ICM G03C007-30

CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 640873	A2	19950301	EP 1994-112762	19940816
	R: BE, CH, DE, FR, GB, IT, LI, NL				
	JP 07175189	A2	19950714	JP 1994-205049	19940830
PRAI	US 1993-115483		19930831		
	US 1994-236923		19940502		
OS	MARPAT 123:127431				



AB A multilayer color photog. element having improved **redn.** in **dye** stain while having **reduced** color contamination comprises .gtoreq.1 cyan color-forming Ag halide layer which contains a thiocyanine sensitizing **dye** I [Z1 = S or Se; Z2 = Z1 or -NR4; R1 = H, alkyl; R2, R3 and R4 = alkyl or alkenyl group of less than 18 carbon atoms; V1, V2, V3, V4, V5, V6, V7 and V8 = H, halogen, alkyl, alkyloxy, aryl, heterocyclyl, cyano, hydroxy, amino, carbonamido, trifluoromethyl, acyloxy, alkylthio or maybe connected to form one or more addnl. arom. rings; and X represents a counterion, as necessary, to balance the overall charge of the **dye**] and .gtoreq.1 nonimaging layer contg. a dialkylhydroquinone II [R5, R6 = alkyl]. The nonimaging layer is adjacent the layer contg. the thiocyanine sensitizing **dye** or is in an antihalation layer. The photog. material provides improved **redn.** in **dye** stain and **reduced** color contamination.

ST photog sensitizer color contamination; alkylhydroquinone photog emulsion scavenger

IT Photographic emulsions  
(dialkylhydroquinone scavenger)

IT Photographic sensitizers  
(thiocyanine **dye** in presence of dialkylhydroquinone scavenger)

IT Photographic films  
(color, **reduced** color contamination)

IT 18426-55-6 27268-50-4 155621-18-4 166304-59-2 166304-61-6  
166304-63-8 **166304-65-0** 166304-66-1 166304-68-3  
RL: MOA (Modifier or additive use); USES (Uses)  
(photog. sensitizer in presence of dialkylhydroquinone scavenger)

IT 60236-78-4  
RL: MOA (Modifier or additive use); USES (Uses)  
(scavenger; photog. films with **reduced** color contamination)

IT **166304-65-0**  
RL: MOA (Modifier or additive use); USES (Uses)  
(photog. sensitizer in presence of dialkylhydroquinone scavenger)

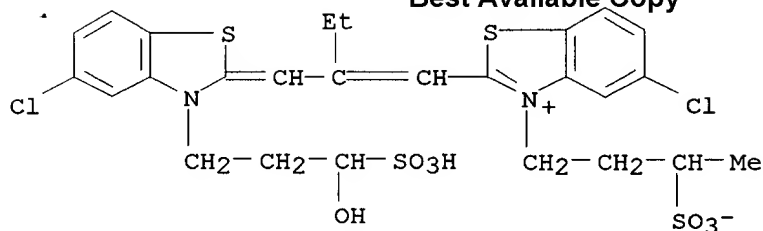
RN 166304-65-0 HCAPLUS

CN Benzothiazolium, 5-chloro-2-[2-[[5-chloro-3-(3-hydroxy-3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-1-butenyl]-3-(3-sulfobutyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 166304-64-9

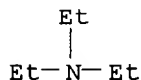
CMF C26 H28 Cl2 N2 O7 S4



CM 2

CRN 121-44-8

CMF C6 H15 N



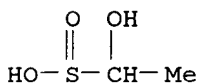
- L10 ANSWER 8 OF 20 HCAPLUS COPYRIGHT 2000 ACS  
 AN 1991:64230 HCAPLUS  
 DN 114:64230  
 TI **Reduction** of vat **dye** precursors by sodium hydroxy- and aminoalkylsulfonates  
 AU Polenov, Yu. V.; Kublashvili, G. D.; Budanov, V. V; Belkin, A. I.; Vorozhtsov, G. N.  
 CS Ivanov. Khim.-Tekhnol. Inst., Ivanovo, USSR  
 SO Zh. Prikl. Khim. (Leningrad) (1990), 63(7), 1622-5  
 CODEN: ZPKHAB; ISSN: 0044-4618  
 DT Journal  
 LA Russian  
 CC 41-5 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)  
 AB A kinetic equation is given for the **reductive** cyclization of 1,1'-binaphthyl-4,4',5,5',8,8'-hexacarboxylic acid N,N'-bis(4-chlorophenyl)diimide Na salt (I) (precursor for perylenedicarboximide vat **dye**) with Na hydroxy- and aminoalkylsulfonates, and rate consts. of the **redn.** were detd. The cyclization gave 3 forms of the perylene final product, differing in the no. and position of **reduced** carbonyl groups in the mol. A scheme of stepwise **redn.** was proposed. Addnl. oxidn. of the perylene **dye** was necessary for effective use of I in **printing textiles**.  
 ST vat **dye** precursor **reductive** cyclization; binaphthylhexacarboxylic diimide **reductive** cyclization; hydroxyalkylsulfonate **reducing** agent **dye** precursor; aminoalkylsulfonate **reducing** agent **dye** precursor; **reducing** agent binaphthylhexacarboxylic diimide; perylenedicarboximide precursor **reductive** cyclization  
 IT Kinetics of ring closure  
 (reductive, of binaphthylhexacarboxylic diimide Na salt to perylenedicarboximide vat **dye**, with Na amino- and hydroxyalkylsulfonates)  
 IT Ring closure and formation  
 (reductive, of binaphthylhexacarboxylic diimide Na salt to perylenedicarboximide vat **dye**, with Na amino- and hydroxyalkylsulfonates, mechanism of)  
 IT 131692-30-3P 131692-31-4P  
 RL: FORM (Formation, nonpreparative); PREP (Preparation)  
 (formation of, in **reductive** cyclization of binaphthylhexacarboxylic diimide Na salt with Na amino- and hydroxyalkylsulfonates)

IT 149-44-0, Sodium hydroxyethanesulfinate **Best Available Copy** 4378-67-0, Sodium  
1-hydroxyethanesulfinate 84195-72-2, Sodium 1-  
aminoethanesulfinate 84195-73-3, Sodium aminomethylsulfinate  
97533-73-8, Sodium (dimethylamino)methylsulfinate 97533-74-9, Sodium  
(diethylamino)methylsulfinate 131708-16-2, Sodium  
1-hydroxypropanesulfinate  
RL: USES (Uses)  
(**reducing** agents, for **reductive** cyclization of  
binaphthylhexacarboxylic diimide Na salt to perylenedicarboximide vat  
**dye**, kinetics and mechanism in relation to)

IT 131708-15-1  
RL: RCT (Reactant)  
(**reductive** cyclization of, to perylenedicarboximide vat  
**dye**, with sodium hydroxy- and aminoalkylsulfinate, kinetics and  
mechanism of)

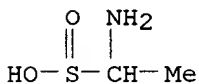
IT 4378-67-0, Sodium 1-hydroxyethanesulfinate 84195-72-2,  
Sodium 1-aminoethanesulfinate 131708-16-2, Sodium  
1-hydroxypropanesulfinate  
RL: USES (Uses)  
(**reducing** agents, for **reductive** cyclization of  
binaphthylhexacarboxylic diimide Na salt to perylenedicarboximide vat  
**dye**, kinetics and mechanism in relation to)

RN 4378-67-0 HCAPLUS  
CN Ethanesulfinic acid, 1-hydroxy-, monosodium salt (8CI, 9CI) (CA INDEX  
NAME)



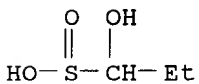
● Na

RN 84195-72-2 HCAPLUS  
CN Ethanesulfinic acid, 1-amino-, monosodium salt (9CI) (CA INDEX NAME)



● Na

RN 131708-16-2 HCAPLUS  
CN 1-Propanesulfinic acid, 1-hydroxy-, monosodium salt (9CI) (CA INDEX NAME)

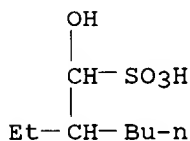


● Na

L10 ANSWER 9 OF 20 HCAPLUS COPYRIGHT 2000 ACS  
AN 1989:441306 HCAPLUS  
DN 111:41306  
TI Removal of peroxides from **textile** treatment baths

IN Gerlach, Rainer; Hiller, Raimann, Wolfgang  
 PA Bayer A.-G., Fed. Rep. Ger.  
 SO Ger. Offen., 9 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 IC ICM D06M009-08  
 ICS D06M007-00; D06M005-06; D06M003-22; D06M003-08; D06M001-00;  
 D06L003-14; D06P005-00; D06P001-38  
 CC 40-8 (Textiles and Fibers)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3721765	A1	19890112	DE 1987-3721765	19870701
	DE 3721765	C2	19930819		
AB	Peroxides are removed from alkali treatment baths, which are produced by <b>bleaching</b> of cellulosic <b>textiles</b> with H2O2, by using as the <b>reducing</b> agent alkali sulfite, -hydrogen sulfite, or -pyrosulfite and optionally l-hydroxyalkanesulfonate or its adduct with an aldehyde. The treated bath then can be used for reactive <b>dyeing</b> . A cotton knit was treated with an alk. H2O2 (6 mL 32%/L) bath at 95.degree. for 30 min and the residual H2O2 content was 50% of the initial concn. and pH 11.5. Two thirds of the bath was drained and contents brought to initial level with cold H2O, an aq. contg. Na pyrosulfite 3, NOAc 0.4, phosphonobutane:1,2,4-tricarboxylic acid 0.2, Na decylsulfite 0.1, acetaldehyde 0.05, Na hydroxymethanesulfonate 0.05, and naphthalene-formaldehyde condensation product 0.05 wt.% was added until the bath gave a neg. test for H2O2. A reactive yellow <b>dye</b> and NaHCO3 was added to the bath, heated 1 h at 45.degree., washed, rinsed, and dried to give brilliant, level yellowish gold <b>dyeing</b> .				
ST	<b>bleaching</b> peroxide removal sulfite; hydroxyalkylsulfonate peroxide removal; acetaldehyde peroxide removal; <b>dyeing</b>				
IT	<b>bleach</b> bath reactive				
IT	<b>Reducing</b> agents				
	(in removal of peroxides from <b>textile bleach</b> baths)				
IT	<b>Bleaching</b>				
	(of <b>textiles</b> with hydrogen peroxide, peroxide removal from bath in, <b>reducing</b> agents for)				
IT	<b>Dyeing</b>				
	(reactive, of cellulosic <b>textiles</b> , use of <b>reduced</b> peroxide <b>bleach</b> baths for)				
IT	7722-84-1				
	(bleaching, of <b>textiles</b> with hydrogen peroxide, peroxide removal from bath in, <b>reducing</b> agents for)				
IT	75-07-0, Acetaldehyde, uses and miscellaneous 870-72-4, Sodium hydroxymethane sulfonate 7631-90-5, Sodium hydrogen sulfite 7681-57-4, Sodium pyrosulfite 13521-83-0, Sodium glutarate 121591-01-3				
	(reducing agent, in removal of peroxides from <b>textile bleach</b> baths)				
IT	121591-01-3				
	(reducing agent, in removal of peroxides from <b>textile bleach</b> baths)				
RN	121591-01-3 HCAPLUS				
CN	1-Hexanesulfonic Acid, 2-ethyl-1-hydroxy- (9CI) (CA INDEX NAME)				



L10 ANSWER 10 OF 20 HCAPLUS COPYRIGHT 2000 ACS  
 AN 1986:635689 HCAPLUS  
 DN 105:235689



TI Processing method of Best Available Copy color photosensitive material  
 IN Kurematsu, Masayuki; Koboshi, Shigeharu  
 PA Konishiroku Photo Industry Co., Ltd. , Japan  
 SO Eur. Pat. Appl., 89 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 IC ICM G03C007-40  
 CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 186504	A2	19860702	EP 1985-309441	19851223
	EP 186504	A3	19880720		
	EP 186504	B1	19910306		
	R: BE, DE, GB				
	JP 61151649	A2	19860710	JP 1984-280964	19841226
	JP 63034460	B4	19880711		
	CA 1287249	A1	19910806	CA 1985-498682	19851227
	US 4855217	A	19890808	US 1988-170670	19880318
PRAI	JP 1984-280964		19841226		
	US 1985-812591		19851223		
	US 1987-21533		19870226		

GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB A developed Ag halide color photog. material is treated with a fixing or **bleach**-fixing soln. and, without the washing step, treated with a washless stabilizing soln. in the presence of .gtoreq.1 of the compds. I, II, III, and IV [R-R5 = H, halogen, OH, alkyl, alkoxy, sulfo, NHCH2SO3M (M = cation); R6, R8 = H, alkyl, aryl, heterocyclyl; R7, R9 = OH, alkoxy, substituted alkoxy, CN, CF3, CO2R18, CONHR18, NHCOR18 (R18 = H, alkyl, aryl), NH2, C1-4 alkyl-substituted NH2, V (X1 = O, S, CH2; p, q = 1, 2); n = 0, 1, 2; m, o = 0, 1; R10-R13 = H, alkyl, aryl, aralkyl, heterocyclyl; .gtoreq.1 of R10-R13 is a group other than H; X = 0.5; r = 1, 2, 3; R14 = alkyl, aryl heterocyclyl; R15 = OH, alkyl, alkoxy, substituted alkoxy, CN, CF3, CO2R18, CONHR18, NHCOR18, NH2, C1-4 alkyl-substituted NH2, V (X1, R18, p, q are the same as above); R16 = OR19, NR20R21 (R19, R20, R21 = H, alkyl, R20 and R21 in combination with the N atom may form a ring); R17 = H, Cl, alkoxy, alkyl; l = 1, 2]. The new photog. processing method makes it possible to largely **reduce** the amt. of water for washing, thus providing reservation of water resources and environmental protection. Thus, a polyethylene-coated paper support was coated with a blue-sensitive Ag halide emulsion layer, a gelatin layer, a green-sensitive Ag halide emulsion layer, a gelatin layer, a red-sensitive Ag halide emulsion layer, and a gelatin layer to give a color photog. film, exposed, color developed, **bleach**-fixed, stabilized in a soln. contg. 5-chloro-2-methyl-4-isothiazolin-3-one 0.02, 2-methyl-4-isothiazolin-3-one 0.02, ethylene glycol 1.0, 2-octyl-4-isothiazolin-3-one 0.01, 60% aq. 1-hydroxyethylidene-1,1-disulfonic acid 3.0, 45% aq. BiCl3 0.65, MgSO4.7H2O 0.2, 25% NH4OH 2.5, tri-Na nitrilotriacetate 1.5, and HCHO-Na2SO3 adduct 3.0 g, VI 5 mg, and H2O to 1 L (with pH adjusted to 7.0 with H2SO4) and dried to give a **print** with yellow stain 0.09 (immediately after processing) and 0.09 (after 2 wk storage) and cyan **dye** fading rate 24% (immediately after processing) and 24% (after 2 wk storage) vs. 0.10 and 0.24 and 49% and 42%, resp., for a control using a stabilizing soln. contg. HCHO 1 g/L in the place of the HCHO-Na2SO3 adduct and HO VI.

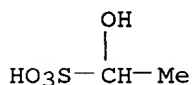
ST stabilizing soln washless color processing

IT Aldehydes, uses and miscellaneous

RL: USES (Uses)

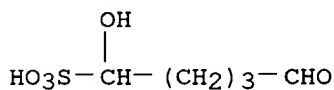
(washless photog. stabilizing solns. contg., for color processing)

IT Photographic process **Best Available Copy**  
 (color, washless stabilizing solns. for)  
 IT 53953-04-1 63059-36-9 66096-14-8 104497-94-1 104881-81-4  
 105344-47-6  
 RL: USES (Uses)  
 (washless photog. stabilizing solns. contg. aldehyde and, for color  
 processing)  
 IT 50-00-0, uses and miscellaneous 75-07-0, uses and miscellaneous  
 111-30-8 870-72-4 **918-04-7 58202-08-7**  
 RL: USES (Uses)  
 (washless photog. stabilizing solns. contg., for color processing)  
 IT **918-04-7 58202-08-7**  
 RL: USES (Uses)  
 (washless photog. stabilizing solns. contg., for color processing)  
 RN 918-04-7 HCAPLUS  
 CN Ethanesulfonic acid, 1-hydroxy-, monosodium salt (8CI, 9CI) (CA INDEX  
 NAME)



● Na

RN 58202-08-7 HCAPLUS  
 CN 1-Pentanesulfonic acid, 1-hydroxy-5-oxo-, monosodium salt (9CI) (CA INDEX  
 NAME)

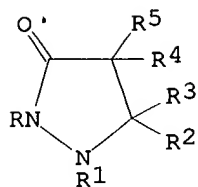


● Na

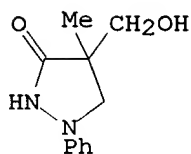
L10 ANSWER 11 OF 20 HCAPLUS COPYRIGHT 2000 ACS  
 AN 1986:99430 HCAPLUS  
 DN 104:99430  
 TI Method of **dye** image formation  
 IN Hirabayashi, Shigeto; Oya, Yukio  
 PA Konishiroku Photo Industry Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 15 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM G03C007-26  
 ICS G03C007-30  
 CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 60165651	A2	19850828	JP 1984-21385	19840208
GI					



I



II

AB An imagewise-exposed Ag halide photog. material that contains .gtoreq.1 compd. having the formula I [R = H, acetyl; R1 = aryl; R2-R5 = (independently) H, alkyl, aryl], and having an av. AgBr content (in total Ag halide) .ltoreq.50% is treated with a color developer contg. Br- corresponding to .gtoreq.1.3 g/L KBr. This processing method **reduces** the amt. of replenisher required for bulky continuous processing, and provides high image d. despite the high Br- concn. Thus, a photog. color paper was prepd. by coating a polyethylene-coated paper support with 8 layers, which were a layer contg. 30 mg II and gelatin, a blue-sensitive emulsion layer (AgBr 50%) contg. a yellow coupler, an intermediate gelatin layer, a green-sensitive emulsion layer (AgBr 30%) contg. a magenta coupler, an intermediate gelatin layer, a red-sensitive emulsion layer (AgBr 30%) contg. a cyan coupler, an intermediate gelatin layer, and a surface gelatin layer. A color developer for the exposed film contained benzyl alc. 8 mL, NH2OH sulfate 2, KBr 1.4, NaCl 1.0, K2SO3 2.0, triethanolamine 2.0, N-ethyl-N-.beta.-methanesulfonamidoethyl-3-methyl-4-aminoaniline sulfate 4.5, K2CO3 32 g, 60% 1-hydroxyethylidene-1,1-disulfonic acid 1.5, fluorescent brightener (50% soln. of Whitex BB) 2 mL, and water 1 L (pH 10.1). After **bleach**-fixing, the images showed a high color reflection d. (2.50-2.54) and low fog (0.03). A control film having a 65% av. AgBr content showed a reflection d. 1.98-2.26, and a control having a 37% av. AgBr content but not contg. II gave a d. 2.01-2.21. Continuous development tests using a replenisher showed very stable color d. and fog.

ST color photog paper pyrazolidinone deriv

IT 13047-13-7 99789-49-8

(photog. color paper with layer contg.)

IT 100-51-6, uses and miscellaneous 102-71-6, uses and miscellaneous

584-08-7 7207-43-4 7647-14-5, uses and miscellaneous 7758-02-3, uses and miscellaneous 10039-54-0 10117-38-1 12224-02-1

**85985-29-1**

(photog. developer contg., for color paper contg. gelatin layer with pyrazolidinone derivs.)

IT 31037-84-0 54636-84-9 61119-59-3

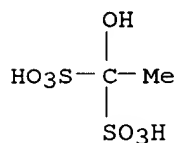
(photog. multilayer paper with gelatin layer contg. pyrazolidinone deriv. and emulsion layer contg.)

IT **85985-29-1**

(photog. developer contg., for color paper contg. gelatin layer with pyrazolidinone derivs.)

RN 85985-29-1 HCAPLUS

CN 1,1-Ethanedisulfonic acid, 1-hydroxy- (9CI) (CA INDEX NAME)



L10 ANSWER 12 OF 20 HCAPLUS COPYRIGHT 2000 ACS

AN 1982:53748 HCAPLUS

DN 96:53748

TI A process for selectively decolorizing **dyed** substrates

IN Clough, Donald Keighley; Lister, Gordon Hobson

PA Sandoz Products Ltd., UK

SO Brit., 4 pp.  
 CODEN: BRXXAA  
 DT Patent  
 LA English  
 IC D06P005-02  
 CC 40-6 (Textiles)  
 FAN.CNT 1

Best Available Copy

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 1591616	A	19810624	GB 1978-5140	19780306
PRAI	GB 1976-5140		19761209		

AB Noncovalently bound **dye** on fabrics **printed** or **dyed** with fiber-reactive **dyes** is selectively decolorized by **redn.** using a liquor contg. sulfoxylate ions. Thus, peroxide-bleached cotton was **dyed** with 6.0 parts Reactive Red 132 in 776 parts liquor by conventional methods. The **dyeing** was rinsed 15 min in 776 parts water at 80.degree. and immersed in a liquor contg. Na formaldehyde sulfoxylate [149-44-0] 1552, NaOH 776.0, and 40% HCHO 194.0 parts in 776 parts water. The temp. was raised during 23 min from 16 to 85.degree. and maintained 50 min at 85.degree.. After running off the liquor the **dyeing** was soaped with 310 parts K pyrophosphite and 109 parts sulfonated castor oil Na salt in 776 parts water and the temp. was raised during 20 min from 16 to 95.degree. and kept 10 min at 95.degree. followed by rinsing 10 min in 776 parts cold water to give a **dyeing** with improved wet fastness.

ST decolorizing selective **dyed** fabric; **printed** fabric  
 selective decolorizing; sulfoxylate **redn** reactive **dye**

IT **Dyes**, reactive  
 (decolorizing of noncovalently bound, by **redn.** with sulfoxylate ions)

IT Fading  
 (fastness to, of fabrics **dyed** or **printed** with reactive **dyes**, selective decolorizing by **redn.** for improved)

IT **Reduction**  
 (of noncovalently bound **dyes**, with sulfoxylate ions, for improved wet fastness)

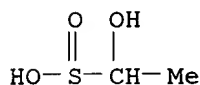
IT 149-44-0 **4378-67-0** 24887-06-7

RL: RCT (Reactant)  
 (**redn.** by, of noncovalently bound **dyes**, for improved wet fastness)

IT **4378-67-0**  
 RL: RCT (Reactant)  
 (**redn.** by, of noncovalently bound **dyes**, for improved wet fastness)

RN 4378-67-0 HCAPLUS

CN Ethanesulfinic acid, 1-hydroxy-, monosodium salt (8CI, 9CI) (CA INDEX NAME)



● Na

L10 ANSWER 13 OF 20 HCAPLUS COPYRIGHT 2000 ACS

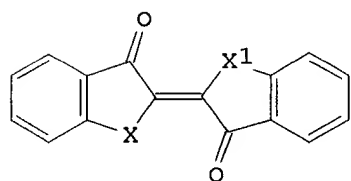
AN 1981:517040 HCAPLUS

DN 95:117040

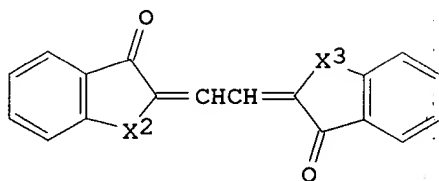
TI Theoretical and spectroscopic studies on indigo **dyes**. XXII.  
 Syntheses of 5,5'- and 6,6'-dialkylated indigo **dyes**

AU Meier, Helmut; Luettkke, Wolfgang

CS Org. Chem. Inst., Univ. Goettingen, Goettingen, D-3400, Fed. Rep. Ger.



I



II

- AB A series of 5,5'- and 6,6'-dialkylated indigo **dyes** I (X, X1 = NH), I (X, X1 = S), I (X = NH, X1 = S), II (X2, X3 = NH), II (X2, X3 = S), and II (X2 = NH, X3 = S) were prepd. by various synthetic methods. Some of these I and II show good soly. and can be used for spectroscopic measurements even in nonpolar solvents.
- ST indigo dialkylated **dye**; thioindigo dialkylated; spectrum  
 indigoid dialkylated **dye**
- IT **Dyes**  
 (5,5'- and 6,6'-dialkylated indigo derivs., prepn. and spectra of)
- IT Nuclear magnetic resonance  
 Ultraviolet and visible spectra  
 (of 5,5'- and 6,6'-dialkylated indigo **dyes**)
- IT 20637-04-1  
 RL: RCT (Reactant)  
 (Grignard reaction of, with isoamyl bromide).
- IT 79097-35-1 79097-36-2  
 RL: RCT (Reactant)  
 (cyclization of)
- IT 79097-85-1  
 (dialkylated indigo **dyes** from)
- IT 95-92-1  
 (in manuf. of dialkyindigo **dyes**)
- IT 79097-31-7 79097-32-8 79097-33-9  
 RL: RCT (Reactant)  
 (oxidative dimerization of)
- IT 79098-20-7P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. and dechlorination of)
- IT 79097-64-6P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. and reaction with chloroacetyl chloride)
- IT 79097-44-2P 79098-17-2P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. and redn. of)
- IT 61391-12-6P 61391-13-7P 62025-38-1P 64361-19-9P 76372-74-2P  
 79097-26-0P 79097-27-1P 79097-28-2P 79097-29-3P 79097-30-6P  
 79097-51-1P 79097-52-2P 79097-53-3P 79097-54-4P 79097-55-5P  
 79097-56-6P 79097-57-7P 79097-58-8P 79097-59-9P 79097-60-2P  
 79097-72-6P 79097-73-7P 79097-74-8P 79097-75-9P 79097-76-0P  
 79097-77-1P 79097-78-2P 79097-79-3P 79097-80-6P 79097-81-7P  
 79097-82-8P 79097-83-9P 79105-77-4P 79105-79-6P 79105-80-9P  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. and spectra of)
- IT 769-92-6P 1130-58-1P 1962-66-9P 3362-32-1P 4237-70-1P 4365-63-3P  
 14962-12-0P 33228-44-3P 58348-10-0P 79097-37-3P 79097-38-4P  
 79097-39-5P 79097-40-8P 79097-41-9P 79097-42-0P 79097-43-1P  
 79097-47-5P 79097-48-6P 79097-62-4P 79097-63-5P 79097-65-7P

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79097-66-8P	79097-67-0P	79097-69-1P	79097-70-4P
79097-71-5P	79097-86-2P	79097-87-3P	79097-88-4P
79097-90-8P	79097-91-9P	79097-92-0P	79097-93-1P
79097-95-3P	79097-96-4P	79097-97-5P	79097-98-6P
79098-00-3P	79098-01-4P	79098-02-5P	79098-03-6P
79098-05-8P	79098-06-9P	79098-07-0P	79098-08-1P
79098-10-5P	79098-11-6P	79098-12-7P	79098-13-8P
79098-15-0P	79098-16-1P	79098-19-4P	79105-75-2P
79105-78-5P	79105-81-0P	79105-82-1P	79105-76-3P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

IT 79-04-9  
RL: RCT (Reactant)  
(reaction of, with (dimethylpentyl)methylacetanilide)

IT 79097-84-0  
RL: RCT (Reactant)  
(reaction of, with acetyltoluidine)

IT 141-82-2, reactions  
RL: RCT (Reactant)  
(reaction of, with alkylanilines)

IT **79097-46-4**  
RL: RCT (Reactant)  
(reaction of, with base)

IT 138-89-6  
RL: RCT (Reactant)  
(reaction of, with benzothiophene deriv.)

IT 332-77-4  
RL: RCT (Reactant)  
(reaction of, with benzothiophenone deriv.)

IT 79097-49-7 79097-50-0  
RL: RCT (Reactant)  
(reaction of, with bromoacetylindoxyls)

IT 79097-61-3  
RL: RCT (Reactant)  
(reaction of, with chloroacetophenone deriv.)

IT 112-67-4  
RL: RCT (Reactant)  
(reaction of, with chlorobenzene)

IT 100-41-4, reactions  
RL: RCT (Reactant)  
(reaction of, with chloromethylbutane in presence of aluminum chloride)

IT 108-88-3, reactions  
RL: RCT (Reactant)  
(reaction of, with chloromethylbutane in presence of ferric chloride)

IT 537-92-8  
RL: RCT (Reactant)  
(reaction of, with dimethylvaleryl chloride)

IT 594-36-5  
RL: RCT (Reactant)  
(reaction of, with ethylbenzene in presence of aluminum chloride)

IT 79098-18-3  
RL: RCT (Reactant)  
(reaction of, with hydrogen chloride)

IT 107-22-2  
RL: RCT (Reactant)  
(reaction of, with methyldolone deriv.)

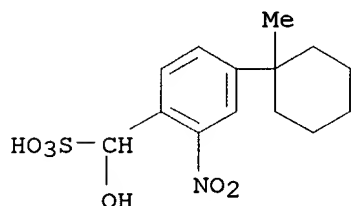
IT 79097-45-3  
RL: RCT (Reactant)  
(reaction of, with nitromethane)

IT 79097-34-0  
RL: RCT (Reactant)  
(reaction of, with nitrosoaniline deriv.)

IT 108-90-7, reactions  
RL: RCT (Reactant)  
(reaction of, with palmitoyl chloride)

IT 105-53-3  
RL: RCT (Reactant)

IT 931-78-2  
 RL: RCT (Reactant)  
 (reaction of, with toluene)  
 IT 594-36-5  
 RL: RCT (Reactant)  
 (reaction of, with toluene in presence of ferric chloride)  
 IT 56108-12-4  
 RL: RCT (Reactant)  
 (rearrangement of, to aniline deriv.)  
 IT 25017-08-7  
 RL: RCT (Reactant)  
 (redn. of)  
 IT 79097-46-4  
 RL: RCT (Reactant)  
 (reaction of, with base)  
 RN 79097-46-4 HCAPLUS  
 CN Benzenemethanesulfonic acid, .alpha.-hydroxy-4-(1-methylcyclohexyl)-2-nitro-, monosodium salt (9CI) (CA INDEX NAME)



● Na

L10 ANSWER 14 OF 20 HCAPLUS COPYRIGHT 2000 ACS  
 AN 1979:46553 HCAPLUS  
 DN 90:46553  
 TI Photographic **dye-bleach** solutions  
 IN Nakamura, Takashi  
 PA Fuji Photo Film Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 12 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC G03C005-52  
 CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic Processes)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 53074425	A2	19780701	JP 1976-150429	19761215

AB **Dye-bleach** solns. for the Ag **dye**  
**bleach** process contain an acid, a H2O-sol. iodide, and .gtoreq.1  
 compd. selected from aldehydes and adducts of aldehydes with bisulfites.  
 The addn. of the aldehyde derivs. improves the stability of the  
**dye-bleach** solns. and also **reduces** yellowing  
 in the highlight areas of the photog. materials. Thus, a com. photog.  
 material (Fujichrome CBP 6206) was exposed through a pos., black-and-white  
 developed, **dye-bleached** in a soln. contg.  
 glutaraldehyde bisulfite 4, sulfamic acid 100, KI 40 g, PhCH2OH 10, a 50%  
 HOAc soln. 10 mL, and Lumichrome 13 mg/L, and subsequently **bleach**  
 -fixed to give a **print** having excellent color balance, and no  
 yellowing in the highlight areas. The **dye-bleach**  
 soln. did not show any sign of degrdn. even after 1 mo storage.  
 ST aldehyde photog **dye bleach** soln

IT Aldehydes, uses and Best Available Copy

RL: USES (Uses)

(color photog. dye-bleach solns. contg. iodide, acid and)

IT Photographic processing

(color, dye-bleach solns. contg. iodide, acid and aldehyde for)

IT 7681-11-0, uses and miscellaneous

RL: USES (Uses)

(color photog. dye-bleach solns. contg. aldehyde, acid and)

IT 5450-96-4 7420-89-5

RL: USES (Uses)

(color photog. dye-bleach solns. contg. iodide, acid and)

IT 104-15-4, uses and miscellaneous 5329-14-6

RL: USES (Uses)

(color photog. dye-bleach solns. contg. iodide, aldehyde and)

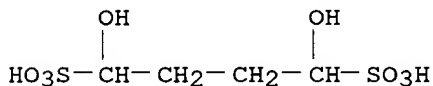
IT 5450-96-4 7420-89-5

RL: USES (Uses)

(color photog. dye-bleach solns. contg. iodide, acid and)

RN 5450-96-4 HCAPLUS

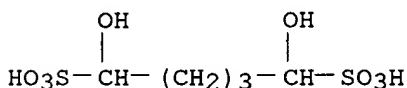
CN 1,4-Butanedisulfonic acid, 1,4-dihydroxy-, disodium salt (7CI, 8CI, 9CI)  
(CA INDEX NAME)



●2 Na

RN 7420-89-5 HCAPLUS

CN 1,5-Pentanedisulfonic acid, 1,5-dihydroxy-, disodium salt (7CI, 8CI, 9CI)  
(CA INDEX NAME)



●2 Na

L10 ANSWER 15 OF 20 HCAPLUS COPYRIGHT 2000 ACS

AN 1974:21385 HCAPLUS

DN 80:21385

TI Stabilizer for photographic silver halide materials

PA Fuji Photo Film Co. Ltd.

SO Brit., 5 pp.

CODEN: BRXXAA

DT Patent

LA English

IC G03C

CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic Processes)

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 1332842	A	19731003	GB 1971-19945	19710610



PKAI JP 1970-49635 19700610

AB A hardener-stabilizer bath contg.  $\text{NH}_4\text{CNS}$ , an Al compd., a sulfite, and an aliph. aldehyde or ketone showed little image fading, **reduced** photog. **print** tackiness, and did not corrode stainless steel. Thus, an activated **print** stabilized by a 10-sec immersion in a soln. contg.  $\text{NH}_4\text{CNS}$  200,  $\text{NaOAc} \cdot 3\text{H}_2\text{O}$  50,  $\text{HOAc}$  70,  $\text{KAl}(\text{SO}_4)_2 \cdot 12\text{H}_2\text{O}$  80,  $\text{K}_2\text{S}_2\text{O}_5$  66.5,  $\text{OHC}(\text{CH}_2)_3\text{CHO}$  70 g, 1-phenyl-5-mercaptotetrazole (0.5% in  $\text{MeOH}$ ) 50 ml, and  $\text{H}_2\text{O}$  to 1000 ml, was not tacky and did not fade after prolonged storage. Stainless steel was not corroded after immersion in the soln. for one day.

ST stabilizer hardener photog noncorrosive; silver halide photog stabilizer; rapid processing photog stabilizer

IT Photographic stabilizers  
(ammonium thiocyanate-hardener solns. as, for **reducing print** stickiness)

IT Photographs  
(image stabilization, by ammonium thiocyanate-hardener solns.)

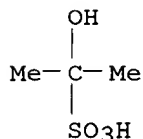
IT 50-00-0, uses and miscellaneous 86-93-1 111-30-8 304-59-6  
**540-92-1** 1762-95-4 2349-67-9 7446-70-0, uses and miscellaneous 7631-90-5 10043-01-3 10043-67-1  
(photog. hardener-stabilizer solns. contg.)

IT 16731-55-8  
(photog. harder-stabilizer solns. contg.)

IT **540-92-1**  
(photog. hardener-stabilizer solns. contg.)

RN 540-92-1 HCAPLUS

CN 2-Propanesulfonic acid, 2-hydroxy-, monosodium salt, (8CI, 9CI) (CA INDEX NAME)



● Na

L10 ANSWER 16 OF 20 HCAPLUS COPYRIGHT 2000 ACS

AN 1973:73579 HCAPLUS

DN 78:73579

TI **Reducing** compositions for **dyeing** and **printing** with the aid of vat and sulfur **dyes**

IN Helouis, Jean Pierre; Perronin, Jean

PA Uguine Kuhlmann

SO Fr., 6 pp.  
CODEN: FRXXAK

DT Patent

LA French

IC D06P

CC 39-7 (Textiles)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	FR 1599687		19700828	FR 1967-128202	19671115
AB	Stable <b>reducing</b> baths contg. $\text{Na}_2\text{S}_2\text{O}_4$ , $\text{RR}_1\text{C}(\text{OH})\text{SO}_3\text{Na}$ ( $\text{R} = \text{H}, \text{Me}, \text{Et}$ ; $\text{R}_1 = \text{H}, \text{Me}$ ), and $\text{Al}_2(\text{SO}_4)_3$ in aq. $\text{NaOH}$ were used in high temp. 2-phase <b>printing</b> of cotton and viscose fabric. Cotton was <b>printed</b> with a Solanthrene Brown paste and developed by foularding in a <b>reducing</b> bath contg. $\text{Na}_2\text{S}_2\text{O}_4$ 33, sodium 1-hydroxyethanesulfonate [ <b>918-04-7</b> ] 10, sodium 1-hydroxy-1-methylethanesulfonate [ <b>540-92-1</b> ] 3.5, $\text{NaOH}$ 110, and $\text{Al}_2(\text{SO}_4)_3$ 10 g/l to give a 2-color				

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printed pattern. The Best Available Copy in advance and was stable 9 days at 20.deg.. Other reducing baths contained sodium 1-hydroxy-1-methylpropanesulfonate [30723-93-4] and sodium hydroxymethanesulfonate [870-72-4].

ST hydroxyethanesulfonate reducing bath; dye redn hydroxyalkanesulfonate; cotton printing dye redn

IT Dyeing

Textile printing

(of cellulosic textiles, reducing agents for, sodium hydroxyalkanesulfonate and sodium hydrosulfite as)

IT Rayon, uses and miscellaneous

RL: USES (Uses)

(printing on fabrics of, reducing agents for, sodium hydroxyalkanesulfonates and sodium hydrosulfite as)

IT Reducing agents

(sodium hydroxyalkanesulfonate and sodium hydrosulfite, for printing of cellulosic textiles)

IT 540-92-1 870-72-4 918-04-7 30723-93-4

RL: USES (Uses)

(reducing agents from sodium hydrosulfite and, for printing of cellulosic textiles)

IT 7775-14-6

RL: USES (Uses)

(reducing agents from sodium hydroxyalkanesulfonates and, for printing of cellulosic textiles)

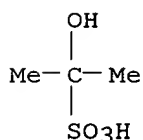
IT 540-92-1 918-04-7 30723-93-4

RL: USES (Uses)

(reducing agents from sodium hydrosulfite and, for printing of cellulosic textiles)

RN 540-92-1 HCAPLUS

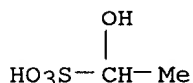
CN 2-Propanesulfonic acid, 2-hydroxy-, monosodium salt (8CI, 9CI) (CA INDEX NAME)



● Na

RN 918-04-7 HCAPLUS

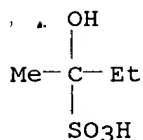
CN Ethanesulfonic acid, 1-hydroxy-, monosodium salt (8CI, 9CI) (CA INDEX NAME)



● Na

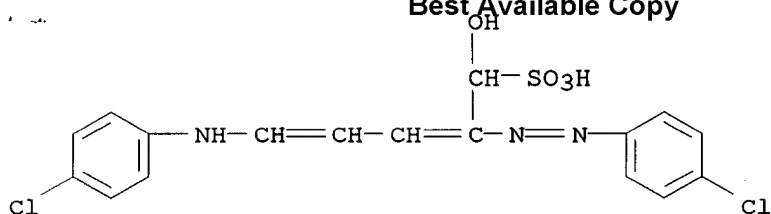
RN 30723-93-4 HCAPLUS

CN 2-Butanesulfonic acid, 2-hydroxy-, monosodium salt (8CI, 9CI) (CA INDEX NAME)



● Na

L10 ANSWER 17 OF 20 HCAPLUS COPYRIGHT 2000 ACS  
 AN 1972:60905 HCAPLUS  
 DN 76:60905  
 TI Aromatic diazo and azo compounds. LXXXVI. Diazo coupling with the Bucherer adduct of pyridine  
 AU Allan, Z. J.; Podstata, J.; Vrba, Z.  
 CS Vyzk. Ustav. Org. Syth., Pardubice-Rybitvi, Czech.  
 SO Collect. Czech. Chem. Commun. (1971), 36(9), 3181-6  
 CODEN: CCCCAK  
 DT Journal  
 LA English  
 CC 40 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)  
 Section cross-reference(s): 27  
 AB The 1:3 adduct of C<sub>5</sub>H<sub>5</sub>N with NaHSO<sub>3</sub> (probably tri-Na 2,4,6-piperidinetrissulfonate [34039-51-5]) was treated with aq. PhN<sub>2</sub>Cl in the presence of CaCO<sub>3</sub> to give yellowish green 3-phenylazo-1,4,5,6-tetrahydropyridine-4,6-disulfonic acid (I) [34039-52-6] and small amts. of yellow 3-(phenylazo)-2H-pyran-2-sulfonic acid (II) [34224-09-4] and yellowish red Na 5-anilino-1-hydroxy-2-(phenylazo)-2,4-pentadiene-1-sulfonate (III) [34033-97-1]. Redn. of I with Zn in NH<sub>4</sub>OH gave 3-aminopyridine and PhNH<sub>2</sub>. The diazo compds p-MeC<sub>6</sub>H<sub>4</sub>N<sub>2</sub>Cl and p-ClC<sub>6</sub>H<sub>4</sub>N<sub>2</sub>Cl reacted similarly to PhN<sub>2</sub>Cl.  
 ST tetrahydropyridine azo compd; pyridine azo compd; pyran azo compd; Bucherer adduct pyridine; azo coupling pyridine deriv; bisulfite adduct pyridine  
 IT **Dyes, azo**  
 (from pyridine Bucherer adduct)  
 IT Coupling reaction  
 (of benzenediazonium derivs. with pyridine Bucherer adduct)  
 IT 34039-51-5  
 RL: RCT (Reactant)  
 (coupling of, with benzenediazonium derivs.)  
 IT 34224-09-4P 35226-11-0P 35226-12-1P **35226-13-2P**  
 35288-71-2P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)  
 IT **35226-13-2P**  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)  
 RN 35226-13-2 HCAPLUS  
 CN 2,4-Pentadiene-1-sulfonic acid, 5-[(4-chlorophenyl)amino]-2-[(4-chlorophenyl)azo]-1-hydroxy-, barium salt (2:1) (9CI) (CA INDEX NAME)



● 1/2 Ba

L10 ANSWER 18 OF 20 HCAPLUS COPYRIGHT 2000 ACS

AN 1971:23593 HCAPLUS

DN 74:23593

TI **Reducing** compositions for **dyeing** baths

IN Helouis, Jean P. R.; Perronin, Jean

PA Uguine Kuhlmann

SO Ger. Offen., 30 pp.

CODEN: GWXXBX

DT Patent

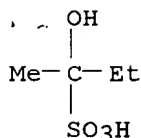
LA German

IC D06P

CC 39 (Textiles)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 1920428	A	19701029	DE 1969-1920428	19690422
	DE 1920428	C3	19760422		
AB	<b>Dyeing</b> baths for vat or S <b>dyes</b> , used in 2-stage <b>printing</b> or high-temperature <b>dyeing</b> cotton or similar <b>textiles</b> , contained a hydrosulfite, e.g. Na <sub>2</sub> S <sub>2</sub> O <sub>4</sub> , and RR1C(OH)SO <sub>3</sub> X (R and R1 = H, aliphatic, or cyclic radical, and X = H or Na). The compns. were storable at room temp. for several weeks without aging. A typical compn. consisted of Na <sub>2</sub> S <sub>2</sub> O <sub>4</sub> 33, MeCH(OH)SO <sub>3</sub> Na 10, Me <sub>2</sub> C(OH)SO <sub>3</sub> Na 3.5, NaOH (36.degree. Be) 110, and Al <sub>2</sub> (SO <sub>4</sub> ) <sub>3</sub> 10 g/l.				
ST	<b>reducing</b> agents vat sulfur <b>dyes</b> ; vat <b>dyes</b> <b>reducing</b> agents; sulfur <b>dyes</b> <b>reducing</b> agents; <b>dyes</b> <b>reducing</b> agents; cotton <b>dyeing</b> <b>reducing</b> agents				
IT	<b>Reducing</b> agents (dithionites-hydroxysulfonates, for <b>dyeing</b> baths)				
IT	<b>Dyeing</b> ( <b>reducing</b> agents for, dithionites-hydroxysulfonates as)				
IT	1561-96-2	1562-00-1	7775-14-6	30723-93-4	
	RL: USES (Uses) ( <b>reducing</b> agents, for <b>dyeing</b> baths for cotton fabrics)				
IT	30723-93-4 RL: USES (Uses) ( <b>reducing</b> agents, for <b>dyeing</b> baths for cotton fabrics)				
RN	30723-93-4 HCAPLUS				
CN	2-Butanesulfonic acid, 2-hydroxy-, monosodium salt (8CI, 9CI) (CA INDEX NAME)				



● Na

L10 ANSWER 19 OF 20 HCAPLUS COPYRIGHT 2000 ACS

AN 1968:70133 HCAPLUS

DN 68:70133

TI Vat **dye printing**

PA Brueggemann, L., K.-G.

SO Ger., 3 pp.

CODEN: GWXXAW

DT Patent

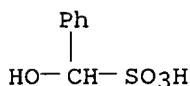
LA German

IC D06Q

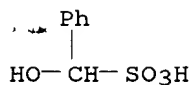
CC 39 (Textiles)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 1258824		19680118	DE	19610412
AB	Alkali- and ammonium salts of BzH sulfoxylic acid, preferably PhCH(OH)SO <sub>2</sub> Na (I), are used as <b>reducing</b> agents in the <b>printing of textiles</b> with vat or sulfur <b>dyes</b> in the two-step <b>printing</b> method. Thus, a cotton fabric was <b>printed</b> with the following <b>printing</b> paste contg. 10% aq. paste of C.I. 59,855 150, H <sub>2</sub> O 50, 3% aq. locust bean gum 600, and 10% dextrin 200 parts. After <b>printing</b> and drying, the fabric was padded with an aq. soln. contg. H <sub>2</sub> O 905, NaOH 50, NaBO <sub>3</sub> 5, and I 40 parts and finally steamed 30 sec. at 115.degree..				
ST	<b>PRINTING DYEING FABRICS; DYEING</b>				
	<b>PRINTING FABRICS; FABRICS PRINTING DYEING</b>				
IT	<b>Textile printing</b> (on cotton and rayon with sulfur and vat <b>dyes</b> with benzaldehyde sulfoxylate <b>reducing</b> agents in two-phase process)				
IT	Rayon, uses and miscellaneous RL: USES (Uses) ( <b>printing</b> on, with sulfur and vat <b>dyes</b> with benzaldehyde sulfoxylate <b>reducing</b> agents in two-phase process)				
IT	<b>4657-12-9</b> RL: USES (Uses) ( <b>printing</b> on cotton and rayon with sulfur and vat <b>dyes</b> in presence of <b>reducing</b> )				
IT	<b>4657-12-9</b> RL: USES (Uses) ( <b>printing</b> on cotton and rayon with sulfur and vat <b>dyes</b> in presence of <b>reducing</b> )				
RN	<b>4657-12-9 HCAPLUS</b>				
CN	Benzenemethanesulfonic acid, .alpha.-hydroxy-, monosodium salt (9CI) (CA INDEX NAME)				



● Na



● Na

L10 ANSWER 20 OF 20 HCAPLUS COPYRIGHT 2000 ACS

AN 1967:455110 HCAPLUS

DN 67:55110

TI Continuous coloring of strips of fibrous material with vat or sulfur dyes

PA Brueggemann, L., K.-G.

SO Ger., 2 pp.

CODEN: GWXXAW

DT Patent

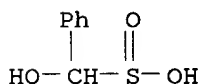
LA German

IC D06P

CC 39 (Textiles)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 1240035		19670511	DE	19620327
AB	A process for the continuous dyeing of fiber material with vat or sulfur dyes, based on steam developing, is described. One of the reducing media is a compd. of the type ACH(OH)SO <sub>2</sub> -Z <sup>+</sup> (I), where A is Ph or an alkylphenyl, hydroxyphenyl, alkoxyphenyl, aminophenyl, halophenyl, or sulfophenyl residue and Z is an alkali metal or NH <sub>4</sub> . Thus, cotton cloth was placed in a 2-roll padder with 25 parts Vat Black 19, 80 parts aq. NaOH (38.degree. Be.), and 50 parts I (A = Ph and Z = Na <sup>+</sup> ). The cloth was steamed 80-90 sec. at 110-20.degree. to give a reversible cloth.				
ST	VAT DYES; ALDEHYDE SULFOXYLATES; SULFUR DYES; DYEING PROCESS; SULFOXYLATES ALDEHYDE				
IT	Dyeing (reducing agent in, sodium salt of .alpha.-hydroxy-.alpha.-toluenesulfinic acid as, for use with sulfur or vat dyes)				
IT	Reducing agents (sodium salt of .alpha.-hydroxy-.alpha.-toluenesulfinic acid as, for dyeing with sulfur or vat dyes)				
IT	14339-77-6 RL: USES (Uses) (as reducing agent in dyeing)				
IT	14339-77-6 RL: USES (Uses) (as reducing agent in dyeing)				
RN	14339-77-6 HCAPLUS				
CN	Benzenemethanesulfinic acid, .alpha.-hydroxy-, monosodium salt (9CI) (CA INDEX NAME)				



● Na

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